

**A STUDY OF COHESION AS A TEXT-FORMING
RESOURCE IN THE ACADEMIC WRITING OF SAUDI
UNDERGRADUATE STUDENTS OF ENGLISH AS A
FOREIGN LANGUAGE (EFL)**

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Abstract

Assuming academic writing as a genre-specific discourse which is linguistically and socio-culturally embedded both in the wider academic discourse community and the local context where it is produced, the present study sought to investigate Saudi EFL undergraduate students' use of cohesive devices as a text-forming resource in the creation of argumentative essays. More specifically, the study attempted to explain the use of cohesion in the creation of texture, and in the rhetorical structure of the sample texts. Structured questionnaires and interviews were also used to gauge the perceptions of the teachers and the students about the teaching and learning of academic writing and cohesive devices, and to triangulate the study.

The researcher adopted a mixed-methods approach for analysis of the data. Halliday and Hasan's (1976) model of cohesion analysis was the mainstay of the data analysis; however, frameworks from other perspectives such as the Systemic Functional Linguistics, English for Specific Purposes, Academic Literacies, and English Language Teaching were also consulted to find out answers to the three research questions of the study.

The results obtained through quantitative and qualitative analysis of the data revealed that cohesive devices were statistically significantly correlated with the text length and sentence units. However, they varied significantly between two extremes of the text length. The appropriate use of cohesive devices was also significant as the non-significant misuse or overuse did not affect the texture or Exam/cohesion scores of the sample texts. The study also claims that cohesive density rather than the text length was the significant variable of differences in the Exam and cohesion scores for the texts. Referential and lexical cohesion appeared to be statistically significant, and thereby the most preferred cohesive devices in the corpus. The pattern of texture in the students' essays corresponded with Halliday and Hasan's (1976 p.296) notion of 'dense texture'. The study also claims to be the first initiative of its kind to have analyzed cohesion in the rhetorical structure of the argumentative essays. The move analysis revealed significant correlations between the moves in the three stages of the sample texts. The survey questionnaires unfolded statistically significant dichotomies between the pedagogic and learning beliefs of the teacher and the student participants.

I argue that cohesion is an important non-structural resource in the creation of texture; however, it provides only a partial picture. The students do use cohesive devices but with instances of misuse and overuse. Moreover, there is the need to help students make use of other types of reiteration, collocations and conjunctions for a better cohesive effect, and lexical and semantic diversity. The study recommends raising awareness and functional ability of the students through explicit teaching of cohesive devices not as discrete grammatical items but as discourse semantic resources of text formation.

Key terms:

Academic literacy; Argumentation; Cohesive devices; Discourse semantics; English for academic purposes; Genre; Lexicogrammar; Rhetorical structure; Systemic functional; Texture

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Table of contents	Page
Chapter 1: Introduction	1
1.0. General introduction	1
1.1. Purpose of the study	4
1.2. Rationale for the study	4
1.3. Summary of the chapter	7
Chapter 2: Background to the study	8
2.0. Educational background of Saudi Arabia	8
2.1. The status of EFL in Saudi Arabia	10
2.2. EFL issues in Saudi context	15
2.3. EFL learners' problems in Saudi Arabia	18
2.4. Chapter summary	20
Chapter 3: Review of literature: Theoretical framework	21
3.0. Introduction	21
3.1. Writing for academic purposes	22
3.1.1. Features of academic writing	24
3.1.2. Typical functions and organization patterns in academic writing	27
3.2. Theoretical perspectives on academic writing	28
3.2.1. Contrastive Rhetoric Theory	28
3.2.2. Cognitive Development Theory	30
3.2.3. Communication Theory	31
3.2.4. Social Constructionism	32
3.2.5. Academic study skills, academic socialization and academic literacy perspectives on academic writing	33
3.3. Linguistic approaches to AW	35
3.3.1. Writing at the micro level	35
3.3.2. Writing at the discourse level	37
3.3.3. Systemic functional linguistics (SFL)	38
3.3.4. Clause relations	41
3.3.5. Theme and Rheme	42
3.4. Pedagogic approaches to teaching academic writing	44
3.4.1. The product approach	45
3.4.2. The process approach	46
3.4.3. Genre-based academic writing	48
3.4.3.1. Genre in SFL	49
3.4.3.2. Genre in ESP tradition	51
3.4.3.3. The New Rhetoric view of genre	52
3.4.4. The Process- Genre Approach	54
3.5. The argumentative essay as genre in academic writing	57
3.5.1. Hyland's (1990) model of the argumentative essay	59
3.6. Research into the Academic Writing of Arab EFL Learners'	61
3.7. Critique of the research studies in the Arab EFL context	63
3.8. The concept of cohesion	64
3.9. Theoretical perspectives on cohesion	66
3.9.1. Cohesion in SFL traditions	66
3.9.1.1. The structural resources of texture and textual metafunction in SFL	71

3.9.1.2. Information structure: Given and New information	71
3.9.1.3. Thematic structure: Theme – Rheme	72
3.9.1.4. Theme structure beyond the clause	72
3.9.1.5. Cohesion, Theme and academic writing pedagogy	73
3.9.2. Cohesion in a Contrastive Rhetorical Perspective	74
3.9.3. Cognitive linguistics perspectives on cohesion	75
3.9.4. ELT perspectives on cohesion	77
3.9.5. Computational linguistics perspective	79
3.9.6. Anaphora resolution studies	80
3.10. Types of cohesive devices	81
3.10.1. Grammatical cohesion	82
3.10.2. Lexical cohesion	83
3.11. Evaluation of cohesion models and preference for Halliday and Hasan's (1976) framework for cohesion analysis	84
3.12. Cohesion as a variable of writing quality	86
3.13. Studies on cohesion in Arab EFL/academic writing	88
3.14. Chapter summary	90
Chapter 4: Research Methodology	91
4.0. Introduction	91
4.1. Theoretical framework for research design	91
4.1.1. Rationale for the use of mixed-methods and triangulation	92
4.1.2. Quantitative research methods	93
4.1.3. Qualitative research methods	94
4.1.4. Quantitative versus qualitative research	96
4.1.5. Mixed-methods and triangulation	97
4.2. Research Aim and objectives	99
4.2.1. Main research aim	100
4.2.2. Research objectives	100
4.3. Research questions	100
4.3.1. Main Question	101
4.3.2. Subsidiary Questions	101
4.4. Study design – Brief overview of design.	101
4.4.1. Survey design	103
4.4.2. Research setting	106
4.4.3. Sample details	108
4.4.4. Sample characteristics	109
4.4.5. Sample size	111
4.4.6. Recruitment method	112
4.4.7. Limitations of the research design	113
4.4.8. Treatment of data	113
4.4.8.1. The data	113
4.4.8.2. Data analysis	115
4.4.8.3. Coding scheme for cohesion analysis	115
4.4.9. Analytical procedures	116
4.4.9.1. Research question 1	117
4.4.9.2. Research question 2	120

4.4.9.3. Research question 3	123
4.4.10. Concerns over reliability and validity	125
4.4.10.1. Reliability	125
4.4.10.2. Validity	126
4.4.11. Ethical issues	127
4.5. Piloting of data analysis	129
4.6. Chapter summary	129
Chapter 5: Results of data analysis	130
5.0. The pilot analysis	130
5.1. The main study	130
5.2. Descriptive statistics and statistical tests used in the study	131
5.2.1. Mean for central tendency	131
5.2.2. Standard deviation for central deviation	131
5.2.3. Median for central tendency	131
5.2.4. Interquartile range for central deviation	132
5.2.5. Cronbach's alpha for reliability analysis	132
5.2.6. Shapiro-Wilk for data normality check	132
5.2.7. Kendal's tau_b and Spearman's rho for correlation analysis	133
5.2.8. Kruskal Wallis and Mann Whitney U for nonparametric variance analysis	134
5.3. Reliability test for the corpus	135
5.4. Normality test for the data	135
5.5. Dealing with non-normal distributions in the data	138
5.6. The corpus characteristics for Research Question 1 and 2	138
5.6.1. Non-parametric test for correlation among corpus variables	141
5.6.2. Nonparametric variance analysis for the corpus	142
5.7. Results for research question 1	144
5.7.1. Results for appropriate and inappropriate CDs	144
5.7.2. Results for A and IA Reference	145
5.7.2.1. Examples of AR and IAR use from the texts	147
5.7.2.2. Correlation analysis of A and IA Reference	148
5.7.3. Results for A and IA Substitution and Ellipsis	148
5.7.3.1. Examples of AS and AE use from the texts	149
5.7.3.2. Correlation analysis for S and E	149
5.7.4. Results for A and IA Conjunctions	150
5.7.4.1. Examples of AC and IAC use from the texts	151
5.7.4.2. Correlation analysis for Conjunctions	152
5.7.5. Results for A & IA Lexical cohesion	152
5.7.5.1. Examples of AL and IAL use from the texts	154
5.7.5.2. Correlation analysis for A & IA Lexical cohesion	154
5.7.6. Results for the overuse of CDs in students' writing	155
5.7.6.1. Examples of OU CDs from the texts	157
5.7.6.2. Correlation analysis for the OU CDs	157
5.7.6.3. Nonparametric analysis of variance between A, IA, and OU CDs	157
5.7.7. Writing quality in relation to cohesion scores (CDS)	158
5.7.7.1. Dealing with erroneous student writing	159
5.7.7.2. Exam & relative scores for cohesion in texts	160

5.7.7.3. Results for Exam scores & CDS in relation to the corpus	161
5.7.7.4. Correlation analysis of Exam scores & CDS with the corpus	162
5.7.7.5. Exam scores & CDS in relation to the total cohesion categories	162
5.7.7.6. Exam scores & CDS correlation with ACDs, IACDs) & OU CDs	162
5.7.7.7. Exam scores & CDS & CD density	163
5.8. Results for research question 2	164
5.8.1. Correlation analysis of the CD categories in the rhetorical structure	165
5.8.2. Distribution of CDs in Thesis/Introduction	165
5.8.2.1. Examples of CD use in Introduction	169
5.8.2.2. Correlation analysis of the moves in the Introduction stage	169
5.8.3. Distribution of CDs in argument stage	169
5.8.3.1. Examples of CD use in the Argument stage	172
5.8.3.2. Correlation analysis of the moves in the Argument stage	172
5.8.4. Distribution of CDs in the conclusion stage	173
5.8.4.1. Examples of CD use in the Conclusion stage	176
5.8.4.2. Correlation analysis of the moves in the Conclusion stage	176
5.9. Results for research question 3	176
5.9.1. Structured questionnaires	176
5.9.2. Descriptive data analysis for the survey questionnaires	177
5.9.3. Reliability Analysis for the survey questionnaires – Cronbach’s Alpha Test	177
5.9.4. Normality tests for the factors on teachers and students' perceptions	178
5.9.5. Descriptive data analysis for all the factors on survey questionnaires	186
5.9.5.1. Correlation analysis of all the factors	186
5.9.5.2. Nonparametric variance analysis for all the factors	187
5.9.6. Teaching & Learning of Academic Writing (TL)	187
5.9.6.1. Correlation analysis of TL	188
5.9.6.2. Mann Whitney U results for TL	189
5.9.7. Arabic Language and culture (ALC)	189
5.9.7.1. Correlation analysis of ALC	190
5.9.7.2. Mann Whitney U for ALC	190
5.9.8. Language Knowledge (LK)	190
5.9.8.1. Correlation analysis of LK	191
5.9.8.2. Mann Whitney U results for LK	191
5.9.9. Text Organization (TO)	191
5.9.9.1. Correlation analysis of TO	193
5.9.9.2. Mann Whitney U results for TO	193
5.9.10. Cohesion (COH)	193
5.9.10.1. Correlation analysis of COH	194
5.9.10.2. Mann Whitney U results for COH	194
5.9.11. Rhetorical Functions (RF)	195
5.9.11.1. Correlation analysis of RF	196
5.9.11.2. Mann Whitney U results for RF	196
5.10.12. Results of teachers' interviews	196
5.10.12.1. Results for interview question 1	197
5.10.12.2. Results for Interview question 2	200
5.10.12.3. Results for interview question 3	204

5.11. Chapter summary	206
Chapter 6: Discussion	207
6.0. Introduction	207
6.1. Discussion on research question 1	207
6.1.1. Overall appropriate, inappropriate and overuse of CDs	208
6.1.2. Referential cohesion	208
6.1.2.1. Appropriate use	208
6.1.2.2. Inappropriate use	210
6.1.2.3. Overused reference	211
6.1.3. Substitution and Ellipsis	212
6.1.4. Conjunctive cohesion	213
6.1.4.1. Appropriate conjunctions	214
6.1.4.2. Inappropriate use of conjunctions	218
6.1.4.3. Overuse of conjunctions	219
6.1.5. Lexical cohesion	220
6.1.5.1. Appropriate use of Lexical cohesion	221
6.1.5.2. Inappropriate use of Lexical cohesion	222
6.1.5.3. Overuse of Lexical cohesion	222
6.1.6. Cohesion and students' exam/CD scores	224
6.1.7. Cohesion and texture in students' argumentative essays	226
6.2. Discussion on research question 2	228
6.2.1. Cohesion in the Thesis/Introduction stage	228
6.2.1.1. Gambit	229
6.2.1.2. Information	230
6.2.1.3. Proposition/Thesis statement	232
6.2.1.4. Evaluation	234
6.2.1.5. Marker	235
6.2.2. Argument stage	236
6.2.2.1. Marker	237
6.2.2.2. Restatement	237
6.2.2.3. Claim	238
6.2.2.4. Support	240
6.2.3. Conclusion	241
6.2.3.1. Marker	242
6.2.3.2. Consolidation	243
6.2.3.3. Affirmation	244
6.2.3.4. Close	244
6.3. Research question 3	246
6.3.1. Structured questionnaires	246
6.3.1.1. Teaching and learning of academic writing (TL)	246
6.3.1.2. Arabic language and culture (ALC)	250
6.3.1.3. Language knowledge (LK)	251
6.3.1.4. Text organization (TO)	253
6.3.1.5. Cohesion (COH)	254
6.3.1.6. Rhetorical functions (RF)	256
6.3.2. Teachers' interviews	258

6.3.2.1. Interview question 1	258
6.3.2.2. Interview question 2	259
6.3.2.3. Interview question 3	261
6.4. Chapter summary	263
Chapter 7: Conclusion: limitations, implications, and recommendations	264
7.0. Limitations of the Study	264
7.1. Implications of the Study	265
7.2. Recommendations for further research	266
7.3. Conclusion	267
8.0. References	269
9.0. Appendices	302
Appendix 1 Typical organization patterns and functions in academic writing	302
Appendix 2 Approval from Research and Ethics Committee, De Montfort University	304
Appendix 3 ELCY approval for collection of data	305
Appendix 4 Participant information sheet & consent form	308
Appendix 5 Assessment rubrics	310
Appendix 6 Sample analysis for research questions 1 & 2	312
Appendix 7 Reliability analysis for the corpus & survey questionnaires	332
Appendix 8 Scaled Exam & relative cohesion scores	333
Appendix 9 Non-parametric correlation analysis for RQ 1	334
Appendix 10 Non-parametric variance analysis for RQ1	341
Appendix 11 Nonparametric correlation results for RQ 2	357
Appendix 12 Structured questionnaire for teachers	361
Appendix 13 Sample of completed students' questionnaire	364
Appendix 14 Factor distribution of questionnaire items	366
Appendix 15 Percentage scores for items on teachers' & students' surveys	368
Appendix 16 Nonparametric correlation results for teachers' survey	371
Appendix 17 Nonparametric correlation analysis for students' survey	379
Appendix 18 Mann Whitney U results for teachers' & students' surveys	386
Appendix 19 Colour-coding & sample analysis for RQ-3	392

List of figures

F1-LR: Kaplan's (1966, p.14) model of CRT	28
F2-LR: The writing process in process approach to writing	47
F3-LR: Genre as situated social action	50
F4-LR: The process-genre approach	55
F5-LR: Yan's (2005) model of process-genre approach	56
F6-LR: Metafunctions in relation to register and genre	69
C1-MS: QQ-Plot for WPT	136
C2-MS: QQ-Plot for SUPT	136
C3-MS: QQ-Plots for CDPT	137
C4-MS: QQ-Plot for CD Scores	137
C5-MS: Category Distribution of CDs in Students' Argumentative Writing	140
C6-MS: Distribution of CDs in students' argumentative writing	141
C1-RQ1: Distribution of A & IA CDs in the corpus	145
C2-RQ1: Distribution of A & IA Reference in students' argumentative writing	146
C3-RQ1: Distribution of prominent reference types in the corpus	147
C4-RQ1: Distribution of A & IA Substitution & Ellipsis in students' writing	149
C4.a-RQ1: Distribution of A & IA Conjunctions in students' argumentative writing	151
C5-RQ1: Distribution of prominent conjunctions in the corpus	152
C6-RQ1: Distribution of A & IA Lexical cohesion in students' argumentative writing	154
C7-RQ1: Distribution of overused CDs in students' writing	156
C8-RQ1: Category percentage of overused CDs	156
C1-RQ2: Distribution of CDs in Introduction	166
C2-RQ2: Category distribution of CDs in Introduction	167
C3-RQ2: Distribution of CDs in Introduction	168
C4-RQ2: Distribution of CDs in the argument stage	170
C5-RQ2: Category Distribution of CDs in argument stage	171
C6-RQ2: Distribution of CDs in argument stage	172
C7-RQ2-MS: Distribution of CDs in the conclusion stage	173
C8-RQ2-MS: Category distribution of CDs in conclusion stage	174
C9-RQ2: Distribution of CDs in conclusion stage	175
C1-RQ3: Teachers' perceptions about TL	179
C2-RQ3: Students' perceptions about TL	179
C3-RQ3: Teachers' perceptions about ALC	180
C4-RQ3: Students' perceptions about ALC	180
C5-RQ3: Teachers' perceptions about LK	181
C6-RQ3: Students' perceptions about LK	181
C7-RQ3: Teachers' perceptions about TO	182
C8-RQ3: Students' perception about TO	182
C9-RQ3: Teachers' perceptions about COH	183
C10-RQ3: Students' perceptions about COH	183
C11-RQ3: Teachers' perceptions about RF	184
C12-RQ3: Students' perceptions about RF	184
C13-RQ3: Teachers' response to students' ability to use CDs	198
C14-RQ3: Teachers' response to students' strengths in the use of CDs	199
C15-RQ3: Teachers' response to students' weaknesses in the use of CDs	200

C16-RQ3: Teacher beliefs about students' familiarity with RS	202
C17-RQ3: Teacher beliefs about students' use of CDs in RS	203
C18-RQ3: Teacher beliefs about academic functions in RS	204
C19-RQ3: Teacher beliefs about pedagogic effect	205

List of tables

T1-LR: Schematic structures in argumentation	58
T2-LR: Linguistic features of students' academic writing	59
T3-LR-Cohesion in Theme structure	72
T1-RM: Comparison between quantitative and qualitative research paradigms	97
T2-RM: Factor distribution of questionnaire items for teachers' perceptions	104
T3-RM: Qualitative and quantitative data in the study	114
T4-RM: Grammatical and lexical cohesion (Halliday and Hasan, 1976)	114
T5-RM: Coding scheme for cohesive devices (Halliday and Hasan, 1976 p.333-338)	116
T6-RM: Data Analysis Procedures	116
T7-RM: Nature of cohesive relations	118
T8-RM: Representation of cohesion in the linguistic system	119
T9-RM: Hyland (1990 p.69) framework for argumentation	121
T10-RM: Oshima and Houge's (2006 p.143) model of argumentative essay	122
T11-RM: Thematic colour-coding for interview question 1	124
T12-RM: Thematic colour-coding for interview question 2	125
T13-RM: Thematic colour-coding for interview question 3	125
T1-MS: Normality test results for the corpus	135
T2-MS: Descriptive statistics for the corpus	139
T3-MS- : Corpus correlations	142
T4-MS: Group Scale for the text length	143
T1-RQ1: Descriptive Statistics for A & IA Reference	146
T2-RQ1: Descriptive statistics for A & IA Substitution	148
T3-RQ1: Descriptive statistics for A & IA Ellipsis	148
T4-RQ1: Descriptive statistics for Conjunction	150
T5-RQ1: Descriptive statistics for Lexical cohesion	153
T6-RQ1: Descriptive statistics for overuse of CDs	155
T7-RQ1: Mid- term assessment scale	160
T8-RQ1: Final term assessment scale	160
T9-RQ1: Descriptive statistics for Exam & CD Scores in the corpus	161
T10-RQ1: Density groups for cohesion in texts	163
T1-RQ2: Descriptive statistics for CDs in the three stages of the rhetorical structure	164
T2-RQ2: Descriptive statistics for CDs in the Introduction stage of the rhetorical structure	166
T3-RQ2: Descriptive statistics for CDs in the Argument stage of the rhetorical structure	170
T4-RQ2-MS: Descriptive statistics for CDs in the Conclusion stage	174
T1-RQ3: Normality check for the survey questionnaires	178
T2-RQ3: Descriptive statistics for each of the factors	186
T3-RQ3: Mann Whitney U Test Statistics for all the factors	187
T4-RQ3: Descriptive statistics for TL	188
T5-RQ3: Descriptive statistics for ALC	189
T6-RQ3: Descriptive statistics for LK	191
T7-RQ3: Descriptive analysis of TO	192
T8-RQ3: Descriptive analysis of COH	194
T9-RQ3: Descriptive analysis of RF	195
T10-RQ3-MS: Themes & excerpts from teachers' interview question 1	197
T11-RQ3-MS: Themes & excerpts from teachers' interview question 2	200

Chapter one: Introduction

1.0. General introduction

"Typically, teaching/learning how to write in a foreign language is not an easy task for EFL teachers and learners alike" (Belkhir and Benyelles, 2017 p.80). Nunan (2000 p.36) considers writing to be the most challenging skill for both the first language (L1) and the foreign/second (L2) learners; an activity which is not "natural" and needs explicit instruction in order for the people to know "how to write". Bjork and Raisenen (1997), therefore, suggest that writing should form part of the university curriculum both as an essential academic skill across different subject specialism and a tool for language learning and critical thinking. The multiplicity of learning outcomes linked with writing, thus, make it a complex skill. The complexity is embedded in its interactive nature that aims at communication between the writer and a distant and, in most cases, an unknown audience. Pilus (1993) in Nunan (2000, p. 36) refers to a number of constraints that anonymity of the audience puts on the writer who cannot use direct references, receive immediate feedback or respond to readers' reaction via paralinguistic features. Writing then becomes a formidable challenge when, according to Bell and Burnaby (1984) writers have to take hold of different elements such as syntax, lexis, mechanics, lay out, and content in order to produce appropriately structured cohesive and coherent paragraphs and texts. It can be inferred that writing is a complex process comprising of many sub-processes such as planning, collecting data, drafting, revising and editing. Zamel (1983) suggests that these sub-processes are dynamic, non-sequential and interactive. Not only this, these sub-processes are the outcome of interplay among the metacognitive, cognitive, linguistic, and socio-cultural paradigms.

Traditionally, L2 writing pedagogy had been content with teaching discrete linguistic skills at the sentence level (Kepner, 1991) ignoring, if not absolutely, to a great extent the discourse elements which make up a meaningfully negotiable text (Lee: 1996). As a teacher of academic writing in EFL context, I argue that this could partially be due to the institutional constraints dictated by syllabus design and textbook choices, and partly due to the fact that teaching discrete items on writing course can give a more easily measurable account of the teaching and learning outcomes as compared with a discourse-motivated writing course.

The change in approach to teaching writing from the micro to the macro level was initiated after the mid 1950s when "text" as a unit of language started receiving focus in writing curriculum and

pedagogy (Ezza, 2010). This shift in the pedagogic approach was due in part to the developments in linguistic theory influenced by theorists like Hymes (1927 - 2009), Grice (1913 - 1988), Halliday (1925 - 2018), Hassan (1931 - 2015) etc. that introduced linguistic, situational, and socio-cultural context as crucial variables in the process of writing, and thereby, in the creation of discourse (Ezza, 2010). Text linguistics, as the new analysis of writing was dubbed, proposed the notions of texture (Halliday and Hassan, 1976) and standards of textuality (De Beaugrande and Dressler, 1981) which were, in fact, benchmarks for distinguishing texts from non-texts. In other words, it is texture that separates a text from a non-text (Halliday and Hasan, 1976) and one of the defining features of texture is cohesion which holds the text together through its repertoire of cohesive devices (ibid). Cohesion occurs at both the intra-sentence and the inter-sentence levels and is crucial to the interpretation of text. In fact, cohesion – a manifestation of the textual metafunction - is based on non-structural elements of discourse at the lexico-grammatical level, as Halliday and Hasan (1976) put it; however, later linguists in the Systemic Functional Linguistics (SFL) tradition such as Martin (1992, 2001), Rose (2005c), Eggins (2004) etc. describe cohesion from the perspective of discourse semantics. I propose to restrict my analysis of cohesion as a non-structural resource of texture on Halliday and Hasan's (1976) framework. Chapter 3 (3.11) provides rationale for the choice.

Another important and relevant development in this context is the introduction of genre theory which from academic point of view aims at enabling the students to acquire academic discourse appropriate to their subject specialism. Hewings (et al) (2007 p.243) argue that "this type of language awareness is proposed to inform of who the language users are ... and whom they want to be identified with and, importantly, who they don't want to be identified with". I decided to analyze argumentative writing for cohesion analysis because of my experience of teaching this genre to the undergraduate students in Saudi Arabia, the significance of argumentation as a genre in academic discourse, students' problems with academic writing, and the research gaps that still persisted in the study of cohesion and academic writing in Arab EFL context.

This language awareness and competence is achieved through academic discourse which is based on specialized vocabulary, register, functions and structures (Wright, 1992) as well as academic study skills such as note-taking and proof-reading etc. Academic writing which is an integral component of academic discourse is distinct from general and other forms of writing in being

need based, goal oriented, genre focused, and thereby, formal (Bowker, 2007). She suggests that academic writing employs full verb forms rather than contractions, tentative rather than categorical statements, an impersonal style, nominalizations etc. It strictly adheres to the rules of punctuation and grammar, formal structure/format, and citations of published authors. L2 writers are expected to have the ability to employ suitable language skills and language systems to produce genre-specific academic texts in an appropriate style.

As a teacher of academic writing in Saudi Arabia, I have observed that academic writing here shares most of the global features evident in EFL academic settings as well as presents its own peculiarities quite akin to most other Arab EFL contexts. In Saudi Arabia, six years of English language exposure in primary, intermediate and secondary schools forms a context for writing though practiced at a very limited level. Normally, the students are taught lexico-grammar for sentence construction, and controlled writing gradually progressing to semi-controlled and free writing activities. But this is mostly restricted to paragraph level production. At the higher level of education, tertiary or university, students are set to produce, both as classroom and assessment activity, a variety of writing genre such as expository, narrative, and argumentative essays, formal letters (inter-office, intra-office, and business), emails, research reports, dissertations, research articles, and translations from the source language i.e. Arabic to the target language i.e. English (Al-Hazmi and Scholfield, 2007; Jahin, 2012).

Academic writing of Saudi students has revealed problems not only at the lexico-grammatical level but also at the discourse level (Al-Hozaimi, 1993; Aljamhoor, 1996; Al-Semari, 1993; El-Daly, 1991). As a result, their writing does not show characteristics of a cohesive and coherent text which can be comprehensively interpreted by the readers. This situation motivated me to investigate the dynamics of cohesion – one of the standards of textuality -- in order to gain clearer insights into the problems Arab students have in using intersentential cohesion, and ultimately failing in creating texture – the text-forming property of discourse.

A holistic analysis of the studies (Al Jarf, 2001; Atari, 1983; Khalil, 2002; Kharma, 1985) conducted in the Arab EFL context reveal that cohesive devices are integral to the creation of a well-connected text which is not only communicative but also appropriate to the specific genre and the discourse community it belongs to. EFL writing pedagogy should, therefore, explicitly focus on the teaching of cohesive devices in writing for academic purposes so that the students

could internalize how a variety of linguistic choices is used to create cohesive texts. I argue that understanding the functionally effective use of cohesive devices also helps students to pick the right lexico-grammatical choices for the target writing task and thereby, produce texts in conformity with the conventions of the discourse community and expectations of the audience.

1.1. Purpose of the study

The study aims at investigating the use of cohesive devices by Saudi EFL undergraduate students in argumentative essays – a common academic writing genre in universities across the Kingdom. Using Halliday and Hasan's (1976) cohesion analysis model mainly based on Systemic Functional Linguistics (SFL) perspectives and referring to, wherever relevant, other influences from English for Specific/Academic Purposes (ESP/EAP), Academic literacies, and English Language Teaching (ELT) perspectives, the study attempts to analyze and explain cohesion from the following aspects:

- a. Characteristics of intersentential cohesion in relation to creation of texture as observed in the argumentative essays of Saudi EFL undergraduate students.
- b. Behaviour of cohesive devices in the rhetorical structure of these argumentative essays.
- c. Teachers and students' perceptions about the teaching and learning of academic writing and cohesion devices in Arab EFL settings to triangulate and validate 'a' and 'b'.

1.2. Rationale for the study

Despite a huge body of research on discourse analysis and specifically cohesion, there is still want of relevant research in the domain of academic writing with regard to text-internal matters or formal links that make the text cohesive. Halliday and Hassan (1976 p.vii) refer to the relative dearth of resources in the linguistic system that not only help in text construction but also provide “the range of meaning that are specifically associated with relating what is being said or written to its semantic environment. The principal component of these resources is that of cohesion.” The study plans to collect writing samples (argumentative essays) for textual analysis from the undergraduate students in Saudi Arabia which makes it distinctive as most of EFL instruction in Saudi Arabia is conducted at the Foundation/Preparatory Year level, and so is the research base which targets Foundation Year programmes for scholarly investigation. Research at the undergraduate level EFL activity is scarce and the present study is expected to be an

original attempt to investigate the use of cohesive devices in timed (written in real-time examination setting) academic writing of undergraduate students and thereby, analyze the role of cohesion in text construction appropriate to the academic genre and in conformity with the conventions and expectations of the academic discourse community. The proposed study is also significant because of its selection of samples of EFL writers as these are expected to highlight a formative learning phase of novice writers. Finally, the study will be important for its implications on the target genre, pedagogy, and further research.

The preference for choosing argumentative essays as an object of enquiry for the present study was motivated by the fact that they are not only common in academic writing (Hyland, 2009) but are also one of the most challenging to produce especially when compared with narrative, descriptive or expository essays (Ferretti, et. al. 2007; Gleason, 1999; Richards and Schmidt, 1993). The complexity lies in the demands an argumentative essay puts on the novice writers in terms of linguistic features, rhetorical structure and argument development. Besides, argumentative essays use formal written register (Biber, 1988; Louwerse, et al. 2004) and are a reliable source of getting insights into how student writers acquire discourse competence appropriate to their subject specialism.

Cohesion has a crucial function in creating texture and thereby the text (Halliday and Hasan, 1976; Martin, 2001). Limiting itself to the Saudi context, the study attempts to identify and fill in some of the gaps hitherto left in the analysis of cohesion in Saudi EFL academic writing. The mixed findings from the studies on cohesion in academic writing in Arab EFL context (Al-Khatib, 2017; Bacha, 1997; Hamed, 2014; Saud, 2015) indicate that there is scarcity of extensive research on the subject and that the studies which have been conducted to date are few and far between. For one thing, almost all studies adopt Halliday and Hasan's (1976) taxonomy of cohesive devices for their analysis and description. Later perspectives not only from the SFL but also from CRT, cognitive linguistics, academic literacies and ESP/EAP are not generally visible in these researches. Most of the studies base their investigations on frequency counts, conjunctive cohesion, and to a certain extent measure of writing quality. I argue that these studies ignore the text-forming notion of cohesion which is its most basic contribution to the creation of texture by establishing semantic relations between different lexico-grammatical

elements of discourse. Frequency counts or identification of cohesion types give only a partial and therefore, unreliable measure of how cohesion creates texture.

I have tried to identify a number of scholarly gaps that persist in the study of cohesion in the Arab EFL academic writing to date. For instance, there is a want of a study which could identify or account for a comprehensive analysis of characteristics of cohesion which are visible in academic writing and how these characteristics are associated with other features of text. Similarly, the previous studies do not mention different patterns of cohesive devices across genres such as the expository or argumentative and how grammatical and lexical choices in argumentative essays, for example, help in achieving formal academic style and functions. The role of cohesive devices in the rhetorical structuring or "schematic structure" (Eggins, 1994 p.36) (problem-solution, cause-effect, comparison-contrast etc) of academic writing is also a neglected aspect as is the realization of cohesive devices in the metafunctions described in SFL. In addition, analysis of co-occurrence or correlation of cohesive devices with other linguistic items such as the modals, is also a neglected area in Arab EFL context. As Eggins (2004) points out that the Thematic structure has a significant role in achieving text cohesion and thereby texture, there is no study which could establish this proposition through empirical and explanatory research. Hoey (1991) refers to a similar aspect that intrasentence cohesion should be understood as existing not within sentences but among clauses or clause complexes and again there is no study in the Arab EFL research data that investigates cohesion from this perspective. In short, grammatical cohesive devices constitute the main focus of previous studies and lexical cohesion is relatively a neglected area. Hence, there is serious need of investigation into the analysis of lexical cohesive devices also. There is scarcity of studies on the impact of culture on the choice of cohesive devices used in argumentative essays in the Arab EFL world. An investigation of the areas mentioned above can have far-reaching implications for the academia in general and the pedagogy in particular.

Importantly also, the Saudi context does not permit coeducation in institutions at all levels because of the socio-cultural restrictions. This gender segregation in educational institutions has viable implications on research initiatives in the Saudi context. Since it is difficult to reach out to the female students or teachers for collection of data, a study that can account for gender variation or preferences in the choice of linguistic features in academic writing cannot be

conducted. I anticipate a similar situation in regard to this study which may not include data from the female undergraduate students in Saudi universities, and thereby, the findings may show limited generalizability in terms of gender differences causing discourse variation.

On the whole, there is a need of study which could investigate cohesion in different academic genre from SFL, CRT, academic literacies, ESP/EAP, and ELT perspectives and relate the findings to the local EFL context.

1.3. Chapter summary

This chapter presents a brief overview of writing as a highly complex skill built of many micro and macro level components. Cohesion is one of the most essential features of writing that helps to give a piece of text its textual status. Cohesion in academic writing has been studied from a variety of perspectives which have contributed toward developing insights on the topic. The chapter also presents an introductory overview of the purpose of the study in the research settings, academic writing practices, and issues with cohesion in students' writing. Chapter 2 will discuss the educational background in Saudi Arabia and attempt to relate it with the current study.

Chapter 2: Background to the study

2.0. Educational background of Saudi Arabia

As of 2015, Saudi Arabia has an impressive overall literacy rate of 94.7% (IBE-UNESCO, 2011). This speaks of the excellent progress Saudi Arabia has made in the field of education over the years since its establishment in 1932, when there were 12 schools and 700 students (Al-Amri, 2011). From these humble beginnings, Saudi Arabia set on an evolutionary sojourn of educational reform and development which received overwhelming impetus after the discovery of oil in 1938. By 1950, there were 365 schools that enrolled 42000 students (Simmons and Simmons, 1994). The Ministry of Education was set up in 1955 with the express aim of overlooking educational affairs of the kingdom. King Saud University in Riyadh – the capital of the country - became the first Saudi university in 1957. Formal female education was, however, unknown to the kingdom until 1960 when the first school for girls was established in Riyadh (Al-Rawaf and Simmons, 1991). The Ministry of Higher Education started working in 1975. Presently, the kingdom has 25 publicly funded universities, 8 private universities, 495 public sector colleges and 45 private colleges (Abubakar et al. 2016).

Education in the kingdom is managed by different regulatory bodies. The Supreme Committee for Educational Policy, established in 1963, is the highest authority looking after education in Saudi Arabia. Then there is Ministry of Education which supervises general education including elementary, intermediate, and secondary, special education, and adult education and literacy. Higher education, teacher training colleges, and girls' colleges are run by the Ministry of Higher Education. There is a Higher Education Council whose main function is to coordinate post-secondary education. The National Commission for Academic Accreditation and Assessment is responsible for maintaining quality standards. Technical and Vocational Training Corporation (TVTC) administers vocational and technical education (World Data on Education: 2010/11).

According to Rahman and Alhaisoni (2013), Saudi Arabia runs a five-level educational system:

- a. Pre-school which includes nurseries and kindergartens but is limited in operation to cities and larger towns.
- b. Elementary schools with six grades of education for students of age range 6 – 12.
- c. Intermediate level which has three grades for students of age range 12 – 15.

- d. Secondary level which provides three grades of education to students from 15 – 18 years of age. This level includes general education, vocational (technical, commercial, agricultural) education, and religious education.
- e. Post secondary and university level which provides for undergraduate, post-graduate, and PhD studies in diverse disciplines.

Educational policy in Saudi Arabia adheres to the universal tenets of any educational system but is predominantly dictated by religious considerations and cultural priorities (http://www.scfeb.gov.sa/Edu_Policy.htm). Education, with the exception of a few institutes such as King Abdullah University of Science and Technology, is separate for men and women. In the public sector, it is absolutely free and has provisions for generous scholarships both indigenous and foreign. The King Abdullah Scholarship Program (KASP) is reportedly the largest scholarship programme in the world (Pavan, 2016). Figures suggest that there are presently between 110,000 and 125,000 Saudi students of both genders enrolled in 23 different countries. This makes the kingdom the highest provider of government based educational scholarships in the world, and the third highest, after China and India, in terms of student population studying in foreign colleges and universities (Arab News, February 12, 2013). Saudi institutes are keeping themselves abreast with the latest innovations in the domain of education around the globe. Accreditation with world-leading providers such as ABET, CEA etc is ambitiously sought so as to achieve high standards of academic quality. Modern day Saudi instructional paraphernalia are equipped with state-of-the-art technological devices which include Smart Classrooms, Learning Management Systems, Moodle etc.

Such an enormous focus and investment on the spread of education in Saudi Arabia, however, is not without its complications and challenges. Saudi Arabia is predominantly an orthodox Muslim country and although, contrary to practice in many other Muslim countries such as Turkey, Malaysia, Pakistan etc., it distinctly segregates male and female education. This impacts not only the competition among the students but also puts the female students at a disadvantage by denying them access to certain subject areas such as agricultural sciences (Hamdan, 2005). Since religion and culture dominate all aspects of Saudi life, anything in the instructional design or materials that clashes with religious or cultural values is strongly resisted and, therefore, affects learning attitudes and priorities of the learners (Elyas and Badawood, 2017). For instance, I

observed one of my students pasting a white sticker on the image of a family including a female saying pictures are not permissible in the religion. As a result, he could not understand the writing task that was, basically, to be written following details in the prompt he had concealed with the sticker. Instances like this give insight into the learning preferences as well as factors that impede learning especially, EFL in academic contexts. Learners bring these religious and socio-cultural perspectives to the class which become strong variables of classroom dynamics in particular and overall learning in general.

In addition, the Saudi educational context is typically monolingual unlike other EFL/ESL contexts such as that of Pakistan or India where most of the students are bilingual in so far that they use a vernacular as their L1 and a national language as the lingua franca or are from cultures other than the native such as the international students from other countries. The Saudi Arabian educational system, which does not allow non-Arab students to study with the Arabic- speaking at the school level, becomes exclusive for the Saudi students at the college and the university level. This factor has several implications for L2 learning especially that of English which is taught as a compulsory subject in institutions of higher education. L1 interference and low levels of motivation have been widely reported in many research studies (e.g. Khan, 2011) as one of the main causes of low level of English language proficiency among the Saudi EFL students.

2.1. The status of EFL in Saudi Arabia

The spread of globalization has made English language lingua franca of the world as had been predicted by Crystal (2003) in Liton (2012 p. 130) "...it is inevitable that a global language will eventually come to be used by more people than any other language". This view is confirmed by Ehrlich (2008) who found the number of non-native English speakers (NNS) much higher than the native speakers of English (NS) i.e. 400 million versus 300 million respectively. Altan (2012) mentions that the English language has finally established itself as a worldwide language with growing cognizance among its users of the importance it carries not only as a tool of international communication but also as a determinant of social mobility. Saudi Arabia like other countries in the gulf region is no exception as far as the spread of EFL in a globalized world is concerned (Al-Shahrani, 2016). English here is a foreign language i.e. it is not the official language but it has made very clear inroads into the socio-economic and educational life of the

Saudi people. Saudi stakeholders of EFL now need it for international trade and commerce, travel, media, occupational purposes, and more specifically, for academic purposes.

TEFL practices in Saudi Arabia have evolved over a considerable period of time and after a prolonged experimentation with curriculum and textbook matters. Al-Hajailan (2003) refers to two curriculum documents that were developed in regard to setting the aims and objectives of Teaching English as a Foreign Language (TEFL) in Saudi Arabia. The first of these appeared in 1987 and consequently, a series of textbooks "English for Saudi Arabia" was produced which based its teaching methodology on communicative approaches. The second document was written as well as adapted in 2000 by the Department of Curriculum which is a wing in the Ministry of Education.

Saudi Policy of Education states the defining features of TEFL in article 50 as: "Furnishing the students with at least one of the living languages, in addition to their original language, to enable them to acquire knowledge and sciences from other communities and to participate in the service of Islam and humanity" (Al-Hajailan, 2003, p.23). This policy statement calls for developing bilingual learners who are proficient in the use of a foreign language other than Arabic which is the First Language (L1). The policy anticipates that proficiency in an additional language will not only help the Saudi learners acquire the contemporaneous advancements in the domains of science and technology but also preserve Islamic history, values, and cultural heritage using language as a medium for transmitting and receiving religious and cultural influences across cultures. Daif-Allah (2010) also refers to visible preference for multilingualism in Saudi Arabia to cater for the emerging communication needs in a globalized world. TEFL in a Saudi context thus assumes a special prominence in that it caters for the multifaceted communicative needs of the Saudi society as well as ensures stability of religious and cultural sensitivities. This is reflected in Saudi Arabia's concern for developing EFL competence in the students to enable them use the target language effectively for academic, occupational and social purposes, while at the same time selecting an instructional content that does not run counter with the deep seated religious and cultural values. For example, McKay (1992) points out to religious and cultural sensitivities that do not allow for inclusion of any content in the curriculum such as music, romance etc. that clashes with religion or culture. Hence, care is taken that EFL curriculum, textbooks, and teacher input do not show any disrespect for Saudi cultural and religious

sensibilities be they photos of female in western costume, or food and drink items such as pork or wine.

TEFL in Saudi Arabia, according to The Ministry of Education (www.mkgedu.sa), should aim at:

- a. Enabling students to acquire basic language skills (listening, speaking, reading and writing).
- b. Raising students' awareness of the significance of English as a tool of international communication.
- c. Developing positive attitudes among students for EFL learning.
- d. Providing students with requisite linguistic competence to communicate in real life situations.
- e. Equipping students with the necessary linguistic competence needed for occupational purposes.
- f. Raising awareness of the various social, cultural, economic, and religious issues among the students and preparing them to share their role in appropriate solutions.
- g. Training the students linguistically for presenting, explaining, and spreading the concepts and issues about Islam.
- h. Developing students' language ability whereby they could benefit from English speaking peoples, appreciate the notions of global co-operation and understanding and respect of cultural differences among peoples.
- i. Enabling the students linguistically to transfer the scientific and technological developments to the benefit of the Saudi nation.

With the emergence of English as a global Lingua Franca, it has acquired the status of a mandatory foreign language in Saudi educational domain (Shah, et.al, 2013). But this has come after prolonged years of TEFL practice. In the beginning, as pointed out by Rahman and Alhaisoni (2013) there was little emphasis on TEFL which was taught from grade seven onward. Later, it was declared a compulsory subject from grade six and above. There were plans to make TEFL mandatory from grade four but this move had to face severe opposition from the religious orthodoxy and thereby, had to be withheld.

In compliance with the new Saudi education policy, it is mandatory for all colleges, institutes, and universities catering for higher education to adopt English as a medium of instruction for all science departments (Faruk, 2013). As a result, all institutions of higher education now run Preparatory Year Programme (PYP) or Foundation Year Programme (FYP) with primary focus on EFL, and in some cases both English for General Academic Purposes (EGAP) and English for Specific Academic Purposes (ESAP). Beyond the PYP/FYP, there are Associate Degree Level programmes especially in technical and vocational institutes. At this level, English for Academic Purposes (EAP) is taught either focusing on EGAP or ESAP. The same is the case with the Bachelor Level programmes at all universities. Some universities such as the King Saud University and King Abdulaziz University also offer Master level instruction in TESOL/Applied Linguistics. English for Specific Purposes (ESP) or to be more precise English for Occupational Purposes (EOP) is the demand of the professionals working in different occupational cadres. Besides, there is a huge demand for general English and Academic English outside the domain of formal education sector by those who want to learn or develop their English language skills for various personal reason such as international traveling or international examinations such as IELTS or TOFEL.

The PYP/FYP is by far the most extensively implemented TEFL programme in Saudi Higher Education System. With slight variations among institutions, it consists of four semesters/modules with seven to eight weeks of instruction. Each module delivery is regulated by a pacing schedule which maps out the teaching and learning resources. Recently, placement tests have been introduced for enrollment to the PYP. Generally, Oxford Placement Test or the Standardized Test of English Proficiency (STEP) is administered to ascertain the eligibility of the applicant for a suitable programme of instruction. These examinations follow and test language ability as specified in the Common European Framework (CEFR), and place the students into suitable levels starting from Beginner (A1) to Pre-Intermediate (B1). After successful completion of a semester, students move onto the next level. Different universities use their in-house produced supplementary and adapted materials, a variety of textbooks from different publishers such as Pearson-Longman, Oxford University Press, CENGAGE Learning, etc.

EFL learners at the higher education level are all Saudi monolinguals who speak Arabic as L1. They share most of the social, cultural, and religious features with one another. But they come with different levels of intelligence, learning attitudes and preferences, and motivation. Hence, EFL in Saudi context offers classroom dynamics with all its complexities and challenges.

The teacher body comprises of three different backgrounds (Khan, 2011). There are the NS from Anglophonic backgrounds such as the USA, the UK, Canada, Australia, New Zealand, and South Africa; the Arabic speaking from Saudi Arabia, Jordan, Egypt, Sudan, and Algeria; and NNS from countries such as India, Malaysia, Pakistan, Philippines, and Turkey. These teachers possess different levels of qualifications ranging from Bachelors to PhD. It is desirable that they possess specialist qualifications such as an MA in TESOL.TESL/TEFL/Applied Linguistics. Professional certifications like Celta or Delta etc are highly valued as is evident in the recruitment preferences of the recruiters in job advertisements (<https://www.tefl.com/>).

Despite all the serious endeavours to uplift the standards of EFL, the results are not encouraging. Alshumaimeri (2003) in Rahman and Alhaisoni (2013 p. 114) observes that “teachers have pointed out that students leave the secondary stage without the ability to carry out a short conversation”. This situation is further corroborated by the findings of Education First English Proficiency Index (EF EPI, 2017), which rates English language proficiency level in Saudi Arabia as low as 72nd among 80 countries. According to the index, Saudi Arabia is below Tunisia, UAE, Egypt, Qatar, Jordan and above Kuwait, Libya, and Iraq in the Middle East and North Africa (MENA) in terms of English language proficiency. Arab countries in North Africa such as Tunisia and Morocco are multilingual countries, especially after the colonial experience. The education system makes learning of two or more languages obligatory for school level students which is not the case in Saudi Arabia. In addition, countries in the MENA region including UAE and Egypt are also tourist destinations and provide reasonable exposure to the natives to interact with the tourists which obviously promote use of a global lingua franca such as English. On the other hand, countries such as Iraq and Yemen have been affected by prolonged wars which also adversely affected their education system. EFL situation in Saudi Arabia is not very encouraging and calls for an analysis and understanding of the issues that impede effective running of EFL programmes across the kingdom. An analysis of students'

writing, which this study plans to do, can be, therefore, a viable initiative to get insights into the TEFL practices in Saudi higher education system.

2.2. EFL issues in Saudi Context

The EFL issues listed below (Fareh, 2010) have been further elaborated in the discussion that follows to account for some really crucial matters in regard to EFL situation in the Arab world in general and the Saudi context in particular:

- a. Paucity of trained teachers or ineffective teaching methodology.
- b. Teacher-centered rather than learner centered classroom practices.
- c. Low levels of student motivation and lack of threshold level language proficiency for the target course.
- d. Compartmentalization vs. whole language approach.
- e. Lack of emphasis on developing skills– emphasis is rather on rote learning.
- f. Textbooks and teaching materials
- g. Assessment methods
- h. Limited exposure to English

The issues outlined above have been mentioned in several studies conducted in the Saudi EFL context. For instance, Khan (2011 p. 1256-1257) reports that EFL practice in a Saudi context is impacted by several factors: L1 interference, frequency of contact with L2, lack of an early exposure to L2 learning in schools, ineffective teaching methods, want of study skills to promote autonomous learning, "life style, discipline, punctuality, motivation, future aim, family pressure, social status, lack of guidance, and excessive freedom". In another study, Shah et al (2013) found that there are three main indicators of challenge to EFL teaching in Saudi Arabia: social, cultural, and religious sensitivities; low levels of motivation among the learners; and fluid institutional policies and procedures.

“English language teaching is a more painstaking vocation demanding a high degree of professional consciousness that is informed by relevant specialist knowledge and explicit values” (Leung, 2009: p. 55). Drew et al. (2007) believe that teachers’ knowledge and competence have a definite impact on classroom practices. Despite being one of the largest markets for EFL teachers, studies cast shadow of doubt on the teacher-led base of EFL activity in Saudi Arabia.

Studies on the role of teachers in Saudi EFL context have borne out several facets that affect quality teaching. A study by Alosaimi (2007) reports that employers do not appraise teachers' job applications systematically with the consequence that untrained teachers or teachers with irrelevant qualifications get into the EFL job market. Khan (2011) finds this especially true of NS teachers who do not have professional qualifications but receive priority in job selection due to their L1 background and the local recruitment priorities. Similarly, NNS teachers whether from the Arabic background or non-Arabic, lack in professional qualifications suitable to teach EFL. The kingdom has been investing heavily in teacher development programmes by sending the native Saudi teachers to high quality institutions in the USA, Canada, and the UK, but the attempts have not yielded satisfactory results. The study by Doering et al (2003) points to the inability of teachers to integrate technology in the classroom. The Saudi context is not much different. Teachers who are digital immigrants find it hard and complicated to use interactive material effectively.

Language learning involves a holistic exposure to the target language through social interaction and therefore cannot be compartmentalized to the limits of classroom only (Fagan, 2008). Stern (1983) in Hall (2011) puts great emphasis on the usefulness of social-cultural context which cannot be disassociated from effective L2 learning experiences. Similarly, Tudor (2001) believes that language classroom is a socially constructed reality, and that classroom dynamics cannot be divorced from socio-religious edifice of the society. These beliefs and the resultant behavioural norms affect classroom practices, especially when teachers are unaware of the learners' social, cultural and religious sensitivities. For instance, many teachers in Saudi Arabia have referred to the interference of social taboos in their classrooms. Rahman and Alhaisoni (2013) have found that Saudi teachers are reluctant to use communicative approach owing to socio-cultural and institutional restrictions. Shehdeh (2010) has found unfamiliarity with the local culture a big impediment to classroom management for non-Arab teachers - a phenomena which can also affect development and adaptation of the suitable instructional material in conformity with the learners' needs, curriculum objectives and lesson aims.

Motivation has been considered a very crucial variable in foreign language learning. The negative attitude of Arab learners towards English language limits their chances to interact in English and to achieve communicative competence (Shehdeh, 2010). Al-Khairi (2013) reports

that Saudi university undergraduates feel demotivated because of a number of different reasons such as the textbooks; attitude of teachers; peer pressure; pedagogic approaches; lack of use of technology, challenging English grammar and lexis etc. Moskovsky and Alrabai (2009) have observed that Saudi students have limited stock of requisite motivation which can be employed for effective learning output. This observation points to students' beliefs and subjective worldviews which Dörnyei (2005) and Rad (2010) have found to affect how students perceive learning English as well as how they learn it. For instance, a study by Ismail and Majeed (2006) examined the epistemological beliefs of gifted EFL students in Saudi context and compared them with those of ordinary students. 56% of the subjects mentioned that English syntax was very different from that of Arabic. 71% felt shy or embarrassed while communicating with NS in real life situations. However, research on motivation conducted in the Arab context by researchers like Salih (1980) and Zughouli and Taminian (1984) show that the main drive behind learning English among Arab students is the achievement of the goal they have before them, i.e. they have shown instrumental motivation. Their goals are predominantly motivated by social factors such as learning English for tourism or international business or higher studies abroad. The religious factor is perhaps not a strong variable in motivation since Arabic is the language of religion in Saudi Arabia, and curriculum for religious studies is also in Arabic. Only those students may learn English who want to translate religious texts or want to spread the message of Islam by word of mouth to non-Arabic speaking people.

English and Arabic language have dichotomous relation with each other. Both belong to different language families and are at odds as far as syntactic functions and sentence structures are concerned for English is linear while Arabic is parallel (Al Aqad, 2013). Not only this, their morphology, idioms, phrases, verbal expressions and other aspects are so different from each other to embrace harmonious assimilation (Al-Shaikhli and Shalabi, 2011; Fakhri, 1995). Above all, both languages emerge from and are used in completely different socio-cultural settings. Arab society is more closed as compared to the Anglophonic societies where, for example, social equality, interpersonal relations, openness and adaptability to change etc. are perceived differently from the Arab world. These and many other factors impact the learning attitudes and strategies of L2 learners and students resort to employing L1 strategies to learn the target language. This is why L1 interference becomes a big hindrance in EFL learning attempts especially in contexts like Saudi Arabia owing to differences in the source and the target

language. When Saudi learners employ L1 learning strategies to learn the target language, they feel disappointed (Javed et. al. 2012).

Teaching materials or textbooks being used in Arab countries hardly reflect the learners' culture (Shehdeh, 2010). Liton (2012) has also referred to the irrelevance of EFL textbooks to the indigenous socio-cultural context. Textbooks being used in Saudi Arabia are published by world renowned publishers like Pearson-Longman and Oxford University Press. But, since they are produced in a different setting, they tend to become misfit in Saudi context where social, cultural, and religious sensitivities are too rigid to permit acceptance. Furthermore, there is also serious want of revamping the existing syllabus to make it reliably suited to the needs and level of the learners.

Institutional policies and procedures do sometimes hinder delivery of successful teaching and learning (Shah, et. al, 2013). Teachers have to comply with the institutional procedures and policies at the cost of academic integrity sometimes which adversely affects achievement of learning objectives. Institutional pressures may force them to adopt practices that contradict their cognition, beliefs and established practices (Almarza, 1996). The challenge of limited instruction time is also found by Chen and Goh (2010) in other EFL contexts. Contact hours or class timings also affect teaching practices (Drew et al., 2007).

When multiple issues crop up together with all their frequent intensity, it becomes obvious that the learners and the learning outcomes will suffer the most. In such a setting, studies have aimed at investigating major problems that EFL learners face.

2.3. EFL learners' problems in Saudi Arabia

Arab EFL learners share most of the problems with other EFL learners across the globe such as derivable from language systems and skills, teaching quality, textbook matters, motivation and attitudes, and institutional and societal constraints as discussed briefly in the previous section. Research on identifying problems of Arab EFL learners done by Mukattash (1983), Suleiman (1983), and Zughoul (1983; 1987) and Shah et al. (2013) found the following causes which are specific to the local context:

- a. school graduates are not well informed about the university or college they are admitted to
- b. EFL curriculum in some schools and universities is not updated
- c. ineffective teaching methodology
- d. unavailability of authentic learning environment
- e. low levels of motivation among the students.

Learners' problems emerging from these causes are reflected in their L2 production especially in the use of language features employed both at the micro and the macro levels. For instance, Kambal (1980) noted that most Arabic speaking Sudanese EFL students were weak in the use of tenses, verb structure, and subject-verb agreement. In addition, these students could not make appropriate use of tense substitution, tense sequence, tense marker, and uncertainty of the perfect aspect. Mukattash (1983) identified two types of errors: First, errors of pronunciation, morphology, syntax and spelling; second, problems of expression in regard to everyday socialization and subject specialism. Similarly, Al-Jarf (2007) conducted a listening test to measure Saudi students' issues with English spelling. The results revealed that 63% of the spelling errors were phonological, and 37% were orthographic. Atari (1998 p.49-59) studied how teachers evaluate students' language in regard to discourse-forming features of cohesion and coherence. The study found;

discrepancy between the teachers' perceptions of the mechanics and their actual evaluation...These teachers do not pay attention to coherence in their actual holistic evaluation nor do they think of coherence as significant...Some cohesion categories are perceived as significant, namely sentence structure. Other elements, for example, transitional links are not seen as such...It is recommended, therefore, that workshops on cohesion and coherence be conducted for EFL teachers.

I argue that addressing students' language problems becomes a top priority in academic contexts which can be understood as a terminal phase for the EFL learners i.e. successful completion of the studies will enable them entry into the job market. As EAP programmes look after the L2 needs of students who are prospective professionals (Ypsilandis and Kantaridou, 2007), it is important to equip students with language skills and functions which could enable them not only acculturate into their academic community and successfully complete their studies via discourse competence but also give them language proficiency which would help them communicate effectively in different workplace situations.

2.4. Chapter summary

Chapter 2 presents an overview of how the present day educational system in Saudi Arabia evolved from a humble beginning. Several social, cultural and religious factors dictate the policy and implementation of educational priorities in the kingdom. The chapter then moves on to discuss the official policy and current state of EFL affairs, and reveals that cultural and religious sensitivities are the most crucial variable in determining EFL practice in Saudi Arabia. Next, the chapter talks about EFL issues which range from syllabus design to textbook matters, pedagogy to assessment, students' background L2 proficiency and levels of motivation etc. Finally, the chapter focuses on EFL learners' problems which are evident both at the micro and macro level of linguistic and discoursal production and arise out of multiplicity of factors such as the social, cultural, personal, L1 transfer, pedagogic, curricular etc.

Chapter 3: Review of literature: Theoretical framework

3.0. Introduction

Cohesion is one of the standards of the textuality of a text (Beaugrande and Dressler, 1981), and a defining property in the creation of texture which distinguishes texts from non-texts (Halliday and Hasan, 1976). Texture, according to Halliday and Hasan (1976), is composed of both the structural and non-structural elements. The structural elements are the intra-sentence structure, and the macrostructure of discourse. Cohesion is a non-structural resource which holds the text together as a unified piece of discourse and assumes special importance for student writers of English as a Second/Foreign Language (ESL/EFL) both for production of appropriate texts in academic contexts and their development as writers. However, as many studies (Al-Jarf, 2001; Blagoeva, 2004; Kang, 2005; Sadighi and Heydari, 2012; Watson et. al. 2007) have indicated, the use of cohesive devices in academic writing is not without its challenges to the student writers. Studies on cohesion in ESL/EFL academic contexts are, nevertheless, significant as they provide insights into how novice writers employ their knowledge of the lexico-grammar to conform to appropriateness of register and genre in the creation of academic discourse; the curricular, pedagogic and other constraints that impede the development of students as writers of academic English; and the role of extra-linguistic features such as cognitive, social, cultural and institutional in directing the use of cohesive devices in academic writing. The main focus of the present study is to investigate Saudi EFL undergraduate students' use of cohesive devices in the creation of texture in argumentative essays, and in achievement of genre-specific rhetorical functions, and to produce a purely linguistic analysis of the findings received thereby. The study also investigates perceptions of the teachers and the students about teaching and learning of academic writing and cohesive devices in the target context of research.

This chapter presents an overview of academic writing and cohesion in academic contexts particularly in Saudi EFL settings. Academic writing is a complex activity and is informed by various theoretical perspectives such as the Contrastive Rhetoric Theory, Cognitive Development Theory, Communication Theory, Social Constructivism, and Academic Study Skills, Academic Socialization and Academic Literacy perspectives; linguistic approaches influenced by Systemic Functional Linguistics like Clause Relations, Theme-Rheme, and text

analysis; and pedagogic approaches such as the Product Approach, the Process Approach, the Genre Approach and the Process-Genre Approach. Since argumentative essays constitute the representative text for analysis for the present study, the first part of the discussion will involve the study of academic writing specifically drawing on insights from SFL and ESP traditions on academic genre. Other approaches to academic writing mentioned above also find suitable mention though. This is followed by a review of various research studies on writing in EFL context, especially the Arab. The section on academic writing concludes with description of the argumentative essay from both the theoretical and pedagogical point of view. The later part of the chapter focuses on cohesion as a text-forming concept with major focus on perspectives from SFL. Other dimensions such as those of Contrastive Rhetoric, Cognitive Linguistics, and English Language Teaching (ELT) also form part of the discussion. An overview of the studies conducted on cohesion in academic writing in the Arab EFL world will also be presented and is expected to move away from previous reviews most of which have focused on surface level features of cohesion such as frequency counts to include an in-depth survey of grammatical and lexical cohesion at the intersentence/discourse level. The review will also include a study of the extra-linguistic phenomena such as the social, cultural and pedagogic that impact the use of cohesive devices in academic writing. The literature review, on the whole, attempts to identify crucial issues and research gaps in the study of cohesion in regard to its use in academic writing in the Saudi EFL context. These are likely to involve an analysis of cohesion at the inter-sentence level in creating texture; achieving rhetorical functions via use of appropriate register and text organization; the role of cultural factors which account for students' choice of the cohesive devices; and perceptions of the teachers and students about the teaching and learning of academic writing and cohesive devices in Arab EFL context. Issues related to these areas will be discussed in the following sections on academic writing and cohesion, and this review will attempt to synthesize the two sections to develop its research questions from some of the crucial issues and research gaps which are anticipated to emerge from the discussion.

3.1. Writing for academic purposes

Writing, in general, is a challenging skill (Belkhir & Benyelles, 2017; Graham, et al., 2005; Hopkins, 1989) and becomes even more formidable in academic contexts where students are assessed and graded on the basis of their proficiency in writing tasks such as long answers,

assignments, reports, thesis, etc. (Leki and Carson, 1997). Peet (1997) refers to various studies (Grabe and Kaplan, 1996; Raimes, 1992; Reid, 1993) which mention explicit assessment rubrics used to reflect standards of level-specific proficiency of EFL/ESL students' academic writing. The results of assessment, however, reveal that ESL students find it quite challenging to meet the expected standards of writing in academic contexts due to low levels of proficiency (Bacha, 2002). In fact, in order to successfully go through the university examination and complete their studies, L2 student writers such as the Saudi EFL are required to produce written work in conformity with the standards of the academic discourse community as enunciated in its specific learning contexts (Hopkins, 1989; McDonough and Shaw, 2003). Raising the proficiency of students to the level whereby they could produce academically appropriate texts thus appears to be the mainstay of the writing pedagogy, especially in EFL settings. This would engage students to learn both the text-internal (lexico-grammar etc.) and text-external (cultural preferences and discourse community norms etc.) Therefore, my research, via analysis of cohesion, and teaching and learning experiences of the stakeholders, intends to investigate the dynamics of text-production so that a reliable estimation of the students' current linguistic competence may be ascertained. The outcomes are expected to benefit the students, the teachers, the course designers and the researchers, specifically in the Saudi EFL context.

Academic writing is often decontextualized to address a physically remote or unfamiliar audience, and as Widdowson (1979, p.176) puts it, incorporates "covert dialogue" involving an anticipation and understanding of the responses among the supposed interlocutors. This entails that student writing in academic contexts is expected to conform to Grice's (1975) notions of informativity, factual correctness, relevance and clarity. This inherent complexity of academic writing is characterized, according to Hall (1981, p.53) by features which "range from mechanical control to creativity, good grammar, knowledge of subject matter, awareness of stylistic conventions and various mysterious factors in between". Grabe and Kaplan (1996) mention that texts possess varied hierarchical structure because of differences in the aim, position, writer, interlocutors, subject matter, and text-type. In addition, text formation is also influenced by variables such as the interaction of the writer with the text, his anticipation of the readers' knowledge, the content and the context of situation. Connor (1996, p.111) also points to discernible differences that exist in "rhetorical traditions, writer-reader relationships, composing

conventions, text organization, metatextual features, information structure and cohesive patterns". Since the writer assumes a particular stance in regard to the creation of the text, as for instance in argumentative essays, he develops an interface with both the text and the audience which Limon (2007) describes as being placed on patterns such as subjectivity-objectivity, remoteness-proximity, authority-respect, and formality-informality. Academic texts are thus created through an epistemological interplay of semantics, text-types, and socio-cultural rules (ibid) as well as involve sound understanding of textual analysis and rhetorical traditions which are embedded in social and cultural contexts (Limon, 2008; Mauranen, 1992). L2 student writers are thus expected to acquire academic literacy comprising of a set of relevant skills, sub-skills, and strategies on the one hand, and an awareness of the socially and culturally situated knowledge base on the other hand to produce linguistically cohesive and coherent texts. I am, however, particularly interested in finding out the extent to which cohesive devices contribute towards the creation of appropriate texts in academic settings, and achievement of genre-specific academic functions in the rhetorical moves of the argumentative essays.

3.1.1. Features of academic writing

Academic writing in English is different from other types such as General English. I have observed that when students enter higher education and employ their general English skills in academic contexts, they find themselves lacking in the use of appropriate language or academic register which could enable them fulfill different academic functions and complete academic tasks successfully. It is at this point that the awareness of the language features and composing conventions which are specific to academic contexts be raised among the students. Likewise, cohesion is an essential text-forming feature of academic discourse, especially writing, and it is significant to study cohesive devices exhibiting multifarious academic functions in argumentative essays, for instance.

Academic discourse in English is linear and focuses on one main point or idea and every other detail supports the main theme (Hinds, 1990). Since, academic writing aims at providing information, there are no digressions or repetitions as there are, for example, in Arabic which is parallel and involves a lot of repetition (Mohammad and Omer, 2000). This rhetorical dichotomy between English and Arabic can affect EFL students' acquisition of the discourse features of the former, and studies (e.g. Hinkel, 2001) have reported

discernible L1 transfer into the target language discourse, especially the written. Discourse feature differences may also impede achievement of a formal academic register which Hyland (2006, p.13) identifies as the characteristic feature of academic discourse that distinguishes it from non-academic discourse. Formality is achieved when writers use subject-specific terminology, impersonal voice, and precise content. From a linguistic perspective, academic writing typically employs subordinate clauses, complements clauses, sequences of prepositional phrases, participles, passive verbs, lexical density, lexical complexity, nominalization, noun-based phrases, modification of noun phrases, and attributive adjectives (ibid). This entails that there are some textual elements which relate these varied structures together. As Halliday and Hasan (1976 p.10) suggest:

"we cannot in the same way list a set of possible structures for a text, with sentence classes to fill the structural roles. Instead we have to show how sentences, which are structurally independent of one other, may be linked together through particular features of their interpretation; and it is for this that the concept of cohesion is required".

I argue that cohesive devices being lexico-grammatical paraphernalia may function in the configuration of the aforementioned linguistic patterns. For instance, subordinate clause may use conjunctives to establish a semantic relationship with the main clause or other subordinate clause in the same or the previous sentence. Similarly, lexical density cannot be achieved without use of reiteration or collocations. However, the role of cohesive devices in achieving appropriate writing quality is subject to question (Leki, et al, 2008, p. 142). Research has shown correlations between cohesion and writing quality (Liu and Braine, 2005; Norment, 1994) as well as non-significant relationships (Zhang, 2000). Nevertheless, cohesion analysis of academic writing can be used to understand how cohesive devices in their frequency, density, and category function to achieve rhetorical functions in a particular genre and what is the range and frequency of their specificity to that text type. But, I could not come across any research study that investigated the role of cohesion in the rhetorical structure; hence, my interest in exploring how cohesion works in the rhetorical framework of students' argumentative writing.

Academic writing is also explicit about the relationships in the text, and cohesive devices are one source of creating explicitness of logical links among different parts of an academic text. For instance, it uses signal words to help the reader understand organization of ideas as

well as acknowledges sources from where these ideas have been borrowed (Biber, et. al. 1999). The traditional view of academic writing, especially scientific writing, has been to furnish factual information. Added to this function of academic writing is the concept that since the writers take a stance on a particular topic, they need to be cautious in making claims, and hence "hedging" or "tentative language" (Swales, 1990 in Oktay and Demirb, 2014 p.260) is adopted to help writers use language appropriate to the strength of the claim. This is typically relevant of argumentative essays where writers strengthen or refute the claim quite frequently. Cohesive devices can, therefore, be used to create rhetorical patterns, develop generic structures and establish authorial claims. These aspects of the use of cohesive devices are directly relevant to the present study which will conduct an in depth analysis of cohesion in an attempt to understand cohesive features typical of the argumentative essays produced by Saudi EFL undergraduate students.

Hyland (2006, p.13-14) finds academic writing conspicuous for 'high lexical density', 'high nominal style', and 'impersonal constructions'. EAP then posits the concept of 'centrality of discourse' that explains and analyzes the target writing; interprets how these texts have been processed and produced; and reveals how the relationships between subject-specific texts and institutional practices are established (Candlin and Hyland, 1999). Swales (1990) suggests that academic writing taken from this perspective would, in fact, be a genre based, welcoming language analysis by respecting contextual realities and discourse community preferences. Following this, I have chosen argumentative essays for textual analysis because these text types, being a commonly practiced genre in academic settings, can unveil most text producing processes, cultural and pedagogic parameters, and linguistic choices referred to above.

As a teacher of academic writing in the Saudi EFL context, I have observed that despite variations across academic disciplines, teaching and learning of academic writing becomes quite challenging for both the teachers and the students since they have to either follow pre-set textbooks and course outlines or themselves prioritize language features, discourse functions and genre choice for inclusion into the course design. What to include and what not to is quite demanding as is the learners' effort to not only develop functional use of the target language features but also to integrate these language features into their writing to

conform to the requirements of academia and assessment. One of my other observation is that student writing in Saudi context is also impacted by the patterns of feedback given during the process and post-production phase as well as the assessment rubrics which adopt different criteria such as the discrete item analysis, discourse analysis, holistic analysis etc. This is likely to affect the pedagogic initiatives and learning outcomes. Therefore, in order to help the writing programmes in Saudi Arabia successful, I feel that it is essential to find out specific language features to be taught to the Saudi students at different levels of instructions. One such feature is the use of grammatical and lexical cohesive devices, the foci of the present research, to help Saudi EFL students understand a variety of rhetorical functions that facilitate the production of genre-specific texts in academic settings.

3.1.2. Typical functions and organization patterns in academic writing

Bachman and Palmer (2010 p.45) propose that knowledge of text organization is embedded in the writer's linguistic knowledge. The two key components of text organization are cohesion and rhetorical structure. The former pertains to showing "explicitly marked relationships among sentences in written texts" using cohesive devices such as '*therefore*', '*on the other hand*', and '*however*', while the latter is about suitably arranging pieces of information in texts. Hyland and Tse (2004), use the term 'metadiscourse' to refer to the organization of a text through the use of different devices which aim at creating a logical link between different ideas as well as facilitating readers' understanding of the text. My research targets both the explicit relationships i.e. cohesive links in a text, and text organization as achieved through these cohesive devices.

McWhorter (2005) mentions definition, classification, chronological order, process, order of importance, spatial order, cause and effect, comparison and contrast, listing/enumeration, statement and clarification, summary, generalization, exemplification, and addition as typical organization patterns and functions in academic writing (Appendix 1). I, as EFL teacher, believe that one of the issues with teaching these typical functions in Saudi EFL context is the feasibility of their inclusion in the course design since it is not possible to teach all features of text organization in one course. In addition, prioritizing linguistic features especially the cohesive devices is very important since these not only help novice

writers to develop schematic organization of their texts but also to establish logical links between different parts of their writing. As an outcome, it is expected that students' text will have better comprehensibility for the target audience, acceptability from the academic discourse community, and communicative appeal as a piece of discourse.

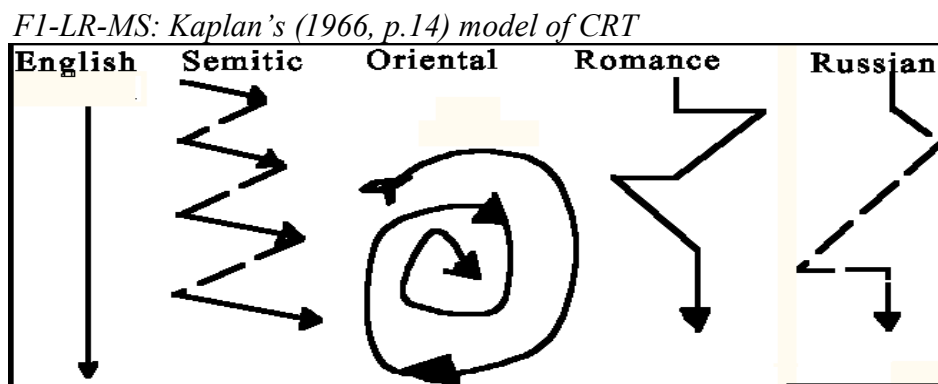
3.2. Theoretical perspectives on academic writing

Theoretical perspectives on academic writing include Contrastive Rhetoric Theory, Cognitive Development Theory, Communication Theory, Social Constructivism, and Academic Study Skills, Academic Socialization and Academic Literacy perspectives.

3.2.1. Contrastive Rhetoric Theory

Kaplan (1966) was the first exponent of Contrastive Rhetoric Theory (CTR) who analyzed texts written by native and non-native speakers to identify formal textual variations caused by cultural contexts. The theory was formulated on the assumption that writers across cultures adhere to different rhetorical expectations and conventions which are peculiar to the writer's culture, and these account for variation in writing styles across different cultures.

Figure 1 illustrates differences between English and other languages.



Kaplan's (1966) model illustrates that English follows a linear pattern while Arabic which is a Semitic language allows for a parallel one. Mohammad and Omar (2000 p.47) identify five dimensional cultural distinction between the English and the Arabic speaking community: oralised v. literate; collectivist v. individualist; high-contact v. low-contact; high-context v.

low-context; reader-responsible v. writer-responsible. This, they believe, affects the choice of linguistic features in both spoken and written discourse. However, there is little empirical evidence to support these claims especially keeping in view that all languages are functional and allow a variety of choices to the users for communication purposes.

Conner (2000) mentions that CRT has been used in cross-cultural analysis of text formation and interpretation through the use of written discourse analysis. CRT has also studied the effects of L1 literacy and culture on L2 literacy. Besides, it has used pedagogic contexts to investigate patterns of writing in L1 and L2, peer and teacher feedback, and student-teacher interaction. Finally, CRT has attempted to explore academic and professional genres.

CRT has been criticized for its "reductionist, deterministic, prescriptive, and essentialist orientation" (Leki, 1997 in Kubota and Lehner, 2004 p.10). These limitations of CRT, probably, led Kubota and Lehner (2004) to develop Critical Contrastive Rhetoric (CCR). They attempted to expand the paradigm of CRT by referring to poststructuralist, post-colonial, and post-modern critiques of language and culture. This paradigm shift also lent an extended preference to "cognitive and socio-cultural variables of writing" to the "purely linguistic framework" (Conner, 1996 p.18). Consequently, variables such as patterns of power relationships in culture, discursive construction of knowledge, colonial construction of cultural dichotomies, and rhetorical plurality brought about by Diaspora and cultural hybridity were all redefined to account for cultural variations in rhetoric (Kubota and Lehner, 2004). However, this view of CCR seems true of the multilingual contexts such as the British or the Canadian where cultural fusion has impacted the linguistic and the rhetorical features of discourse quite visibly. Monolingual contexts such as that of Saudi Arabia are more strikingly dominated by the indigenous culture which reflects itself in the spoken and written manifestations of the language. It, therefore, becomes an interesting research paradigm to study how the monolingual learners apply cultural influences in their attempt to produce written texts in a foreign language.

Despite its limitations, CRT supports understandings of logical structuring and sequencing of discourse forms. Silva (1990) suggests that CRT duly caters for the multiple aspects of a cohesive and coherent paragraph which include topic sentences, supporting detail, and

concluding sentence. It describes the use of signal words/phrases as well as helps the writer to define, compare, contrast, exemplify, illustrate, classify, etc. to write supporting detail for the topic sentence. Hence, a non-native subscriber of CRT finds himself equipped with effective rhetorical strategies that could enable him produce written text in compliance with the writing styles and conventions acceptable to the native speakers of English.

3.2.2. Cognitive Development Theory

Originating in Europe in the 18th century, Cognitive Development Theory (CDT) provided descriptions for the processes involved in the construction and acquisition of knowledge. From the perspective of writing, it focused on the processes that writers use in order to make choices and decisions for the logical progression of their text (Kennedy, 1998). Flower and Hayes (1981) and Bereiter and Scardamalia's models (1987) are well-known for their impact on ESL writing. Flower and Hayes (1981) suggest that writing in English involves brainstorming, planning, generating, translating and editing on repetitive basis. This process is adopted by all writers whether novice or experienced, and consequently, fails to describe the processes that differentiate between proficient or non-proficient writers. On the other hand, Bereiter and Scardamalia (1987) recommend different models for different levels of writing proficiency. Their "knowledge telling model" is for novice writers and focuses only on completion of the assigned task. There is no high level thinking or problem-solving involved. The same applies to the revision of the text where writers only revise at the local level. Their second model, "knowledge transforming model" targets higher level skills such as critical thinking and problem-solving, and an understanding of the content and rhetorical organization. This model engages writers in revision at a more global level which could involve transformation in content. Flower (1994) points to an overemphasis on cognitive factors and, there is a lack of attention to contextual and social factors in this model. Similarly, this model does not account for reasons or the stage when a novice writer becomes an expert writer. Nevertheless, CDT has been a major approach in ESL writing and as Grabe and Kaplan (1996, p. 84) point out, "much current research on writing in L2 is based directly on theoretical and instructional trends in writing-as-a-process theory." The process approach to writing (discussed in detail in the following sections), however, does not "lead to significantly better writing in L2 contexts" (Hyland, 2003, p. 17). Atkinson

(2003a p.10), therefore, put forward the concept of “post-process” to include the missing elements in the process approach - due sensitivity to the sociocultural nature of writing in general and “sociocognitive situatedness, dynamism, [and] diversity” of L2 writing in particular.

I have observed that Saudi EFL context does employ insights from CDT to help students brainstorm and generate ideas for the target composition. However, following Madkour (2016) and as also suggested in the ‘post-process’ approach, Saudi learners need to be trained to use the processes involved in the production of texts, identify through a process of identification relevant lexico-grammatical features which are relevant to the specific genre they intend to produce, and explore relationships between grammar and discourse to make it academically and socially acceptable. This entails that academic writing pedagogy in Saudi Arabia should cater for both the linguistic and the extralinguistic features to help learners develop as student writers. Classroom interaction among students in pairs and groups can be exploited to brainstorm and thereby, identify relevant cohesive devices for the target text; understand different rhetorical functions; and provide peer and teacher feedback on their use.

3.2.3. Communication Theory

Communication theory (CT) puts discourse-in-use as an object of enquiry. This suggests that communication is defined by notions of individualism and interpersonal relations embedded in social and political context (Kennedy, 1998). CT also states that socio-political context cultivates different discourse types and for different purposes such as economical, institutional, cultural, etc. This develops variety in discourse norms and so is true of writing. Cooper and Odell (1977) have mentioned different genres of writing such as dramatic writing, personal writing, reporting, research, academic writing, fiction, poetry, business writing, and technical writing. These would require knowledge and application of not only the writing genres but also the use of micro level writing skills for composing larger units of discourse. Grabe and Kaplan (1996 p.4) state that academic writing should blend “structural sentence units into a more-or-less unique, cohesive and coherent larger structure (as opposed to lists, forms, etc.).” For Saudi EFL students, development of this ability, to cite Freeman,

et. al. (1991) and Madkour (2016), means that they must learn a set of communication strategies to use form, meaning and function of the linguistic elements in order to fulfill the conventions of the discourse community they belong to. I have chosen to analyze cohesive devices as lexico-grammatical entities to find out how these linguistic elements configure in a text to create meaning and rhetorical functions.

3.2.4. Social Constructionism

Social constructionists believe in the construction of knowledge rather than on exploration. This construction of knowledge embedded in concepts, percepts, and models is socially situated, and therefore, perceives of discourse as socially constructed. Social constructionists possess a more global outlook as opposed to other perspectives which are rather local or individualistic. Kennedy (1988) says that social constructionism is based on discourse community's notion of writers and writing; construction of the community in written discourse; formulation and reformulation of community, its discourse, and subject knowledge; role of writers in discursive practices of the community and occupational settings.

Social constructionists employ features of both the process and the product based approaches to writing pedagogy (Zimmerman, 1993). The writers use writing models to construct meaning and adopt processes to generate ideas that could be used in creation of the text. In the product approach to writing, the writers imitate other texts to form meaning, while in the process approach, they share ideas for construction of meaning. Dixon-Krauss (1996) points out that scaffolding is a key concept in writing from social constructionists' perspective. Any challenging writing task will take the novice writers into a zone of proximal development (ZPD) where they will be supported by their peers or the instructor. Another important aspect of writing in social constructionist model is presented by Schumann (1978). His acculturation model refers to the socio-cognitive assimilation of the learner into the target discourse community. This assimilation whereby the learner learns how to get hold of emotive and affective factors can help him to internalize the processes, norms, conventions, and expectations of the written discourse typical of his community. This motivates me, for this research, to study social, cultural and pedagogic factors that

affect the use of cohesive devices in academic writing, and see if these factors facilitate or impede the production of genre-specific texts in Saudi EFL context.

3.2.5. Academic study skills, academic socialization and academic literacy perspectives on academic writing

The modern day academic world is characterized by diversity of teaching and learning contexts, multilingual student body, and ‘heterogeneous mix of academic subject’ (Hyland, 2006 p.17). Study skills, based on the premise that there is a deficit in linguistic knowledge, can be understood as those abilities, strategies and techniques such as note-taking, using a library, using cohesive devices, skimming etc. which facilitate students in understanding and performing academic tasks successfully. Study skills perspective was followed by a belief in the validity of the concept of discourse community for students in the higher education. For subscription to this membership, it was felt to acculturate students into their respective communities whereby they could internalize the norms and conventions necessary for achieving appropriate discourse competence. Discourse competence, however, also involves a fair understanding of and respect to the social and contextual factors as “literacy practices are patterned by social institutions and power relationships” (Hyland, 2006 p.22).

Generally, there are lower-order sub-skills such as copying and dictation which are used to consolidate and scaffold writing as well as develop other aspects of language through writing (Ur, 1996). Higher-order sub-skills perceive writing as a finished product where free writing is achieved through intermediary stages of controlled and semi-controlled writing. Generation and organization of ideas are typical sub-skills used in the process. Most of these subskills and strategies are interactive as far as other language skills are concerned such as note-taking can be used as a sub-skill for reading, listening, and writing respectively. The strategies are sub-divided into four types: meta-cognitive strategies are those conscious processes whereby students get hold of their writing work (Carson and Longhini, 2002; Schmitt, 2002); cognitive strategies are those skills that writers use to implement actual writing actions (ibid); social strategies involve actions such as *asking questions, cooperating with others for task completion, and peer revision* (Cohen and Dornyei, 2002, p. 180); and affective strategies “regulate emotions, motivations and attitudes” (ibid, p. 181).

Foxcroft (2004) suggests that academic literacy should aim at helping student writers to construct meaning from the academic content which entails a fuller understanding of how texts are constructed and interpreted in academic world. In addition, academic literacy should also train students to understand words and discourse signals in their context. In other words, appropriate use of cohesive devices in academic writing – one of the foci of the present study – seems to be one of the prime targets of academic literacy. This can have further implications on the development of students' writing especially on discourse organization, argument development, inferencing, and critical reading.

Scott (1993 p.46) introduces the concept of "deficit pedagogy" which suggests that novice writers have a limited range of rhetorical devices and communication skills at their disposal to produce academic prose conforming to the standards of their discourse community. This calls for redesigning of the writing courses in order to develop learners' inferencing skills (Wiener, 1992) as well as higher-order thinking skills (Brown, 1991). Hence, academic literacy can be used to help students develop an appreciation of audience, purpose and appropriate style in order to meet the conventions of rhetorical organization of the text. The academic literacies model, however, also deals with the academic context that produces a text as well as explores levels of motivation for and constraints on a successful writing experience. In addition, personal identity is a significant variable in the scheme of academic writing and the two are covertly linked with each other in an academic literacy framework: 'A student's personal identity...may be challenged by the forms of writing required in the different disciplines' (Lea and Street, 2000 p.35). Realization of personal identity among students can enable them achieve spontaneity in generating ideas relevant to their subject specialism.

Study skills, academic socialization and academic literacy model takes academic writing beyond the domains of the purely linguistic paraphernalia. However, it is a complex phenomenon to integrate this model into the existing academic practices in contexts such as Saudi Arabia where institutional policies and time constraints might impede suitable allowance for study skills into the curriculum design. Another challenge is to identify set of relevant study skills that has the potential to reinforce language use in academic contexts (Hyland, 2006). For instance, there is scarcity of research that could point to study skills and

strategies Saudi learners employ while using cohesive devices in academic discourse. Similarly, following Norton's (2013) notion of social identity, academic socialization in Saudi Arabia has its own problems especially in regard to personal identity as the learners have tribal associations which segregate them not only in the academia but also in the social and workplace contexts. Added to this is the extremely limited use of English outside academia (Elyas & Al Grigri, 2014) which obstructs the acculturation process. All this points to a research gap whereby a study, as that of mine, may try to investigate the extent to which social, cultural and pedagogic variables affect the use of cohesive devices in the argumentative essays of Saudi EFL students and thereby, improve or obstruct the growth of academic literacy among these student writers as members of the academic discourse community. The findings may have useful implications for teaching practices, course design and learner preparedness in the future.

3.3. Linguistic approaches to academic writing

Linguistics approaches include analysis of writing at both the micro-level (clause and sentence construction) and the macro-level (paragraph and discourse composition) as evolved through different stages of writing instruction finally culminating in SFL notions of clause relations, Theme-Rheme organization and text analysis. Though this study proposes to involve explanation of the use of cohesive devices from academic literacy perspectives as referred to above (3.2.5), linguistic approaches to the analysis of cohesion, especially from Systemic Functional Linguistics (SFL) perspective will be predominantly the mainstay of enquiry for two main reasons: First, cohesion is basically a linguistic or text-internal concept which involves lexicogrammar and discourse semantics at the micro and the macro level, and therefore, linguistic analysis is best suited for the purpose. Secondly, the issues and research gaps that are likely to be identified may require linguistic analysis of the phenomena. Academic literacy perspectives, thus, could be used as a triangulation strategy to strengthen the research design and collate the linguistic explanation with some relevant extra-linguistic factors.

3.3.1. Writing at the micro level

Writing at the micro level refers to the production of grammatically accurate sentences. Influenced by the structuralists and the behaviourists and adopting controlled or guided approach to writing, sentence level writing instruction employed Grammar Translation and

Audio-lingual Methods in the classrooms. This perspective on teaching writing gave preference to form over meaning. Good writing was that which was produced in compliance with formal linguistic features and mostly produced factual information and elaborate exposition. The focus of pedagogy was prescriptive and on explicit teaching of the rules of grammar. Reid (1993 p.24) finds out that “students are taught incrementally, error is prevented, and fluency is expected to arise out of practice with structures”. More importantly, writing was an isolated activity completely divorced from academic, social and cultural context. Classroom activities mostly comprised of memorizing the rules of grammar and vocabulary, copying, dictation, synthesis, and substitution exercises.

Hyland (2003) proposes a four-stage process to indicate use of language systems as a starting point for teaching writing:

- a. Familiarization: A text is used to focus on selected aspects of grammar and vocabulary.
- b. Controlled writing: substitution tables are used whereby learners change fixed structures.
- c. Guided writing: Exemplar texts are modeled.
- d. Free writing: Newly learnt patterns are used to produce essays, letters, etc.

However, the development of writing as an academic skill and the quality of good writing do not come from adherence to syntactic features and grammatical forms alone. Research shows that students with good knowledge of the grammar of a language are unable to produce acceptable texts (Hyland, 2002; 2003). One big issue with sentence level writing instruction, especially in Saudi settings, is that the students exhibit a very limited progress in developing writing skill (Asmari, 2013) for they cannot appreciate the purpose of writing beyond the sentence especially for the sake of communication that occurs in well defined contexts. Although ability to use discrete language items on a limited scale does not ensure progression towards becoming mature writers, it can be interesting to investigate, though not the aim of the present research, students’ use of the grammatical and lexical cohesion at the intra-sentence level and see how they use these cohesive devices not only in developing logical links at the micro level but also how this knowledge of cohesion is carried forward in creating larger units of discourse.

3.3.2. Writing at the discourse level

Unlike sentence level perspectives on writing, discourse level approaches assume communicative and rhetorical functions of texts as central to writing instruction. Academic writing is the primary focus of this approach, and teachers' main role is to judge student writing. As propounded by the current-traditional rhetoric or functional approach, particular language forms can be used to perform a variety of communicative functions and "students can be taught the functions most relevant to their needs" (Hyland, 2003 p.6).

Writing pedagogy in the Saudi context, which is mostly a classroom only activity, is constrained by many factors such as "the students' beliefs, curriculum, pedagogy, and administrative processes" (Al-Seghayer, 2014 p.17). The only external support system in the form of writing centers is established at five Saudi institutions - the Writing Center at Yanbu (the research context for this study) set up in 2014 - being one of them (Eusafzai, 2018).

Writing programmes are, therefore, designed specific to an institution's policies. A writing programme at one institution can be generalized to another writing contexts if there are similarities in course objectives. Methodology, materials and assessment matters may vary though. Following Oshima and Houge (2006), Saudi undergraduate students -the subjects of my research - are taught how to write different types of paragraphs and essays such as the narrative, descriptive, expository, argumentative etc. with the help of topic sentence, thesis statement, supporting sentences, and concluding sentences. Text composition also includes use of signal words or transitions, exemplification, comparison and contrast, cause and effect, fact and figure patterns to support and sequence information in a text for achieving both cohesive and coherent effect. Typical format is based on Introduction-Body-Conclusion. Competence in writing is achieved through identifying and internalizing rhetorical structures and functions. Teaching focus stays on giving students extensive practice in free writing activities which may include but are not limited to reordering a jumbled paragraph, identifying topic and concluding sentences, choosing relevant sentences to provide for the missing parts in a paragraph, and developing a complete paragraph from a given outline or information. A writing model can also be imitated. Students at an advance level may also practice developing an outline, creating a suitable topic sentence, brainstorming and then enlisting supporting detail for the main idea.

However, the students are prone to producing some unusual patterns in the use of "grammar, lexis, semantics and mechanics" (Nuruzzaman, et al. 2018 p.31) that may affect the quality of writing as a piece of appropriate academic prose. Therefore, it is important to investigate cohesive devices at the discourse level to find out how Saudi students use grammatical and lexical cohesion to design and develop academic discourse. An initiative to observe the behaviour of cohesive devices in the rhetorical structure of argumentative essays is one of the likely foci of the current study. Expectedly, this cohesion analysis will shed light on characteristics of individual devices such as reference, substitution, ellipsis, conjunction, and lexical cohesion evident in the main stages and moves of the argumentative essays of these Saudi students.

3.3.3. Systemic functional linguistics (SFL)

The basic tenet of SFL is that “meaning implies choice” (O’Donnell, 2012 p.5). A “systemic” approach provides for meaningful choices in language (e.g., active vs. passive) without considering structures that produced it (ibid). The four main theoretical claims of SFL are that language is functional; its function is to make meanings (semantic); these meanings are influenced by social and cultural contexts; and the process of using language is semiotic (Eggins, 2004, p. 3). Since cohesion implies choice of the lexico-grammar to establish semantic associations between or among different parts of the text, a cohesion analysis of writing can not only unfold student writers' use of language beyond the precincts of form and structure to create meaning for the intended rhetorical function but also the impact of native culture on their writing as an academic product. I am, therefore, interested in focusing on the first three of these SFL claims in an attempt to explain Saudi students' use of cohesion in argumentative essays.

SFL, as a matter of fact, investigates and explains the commonalities between culture, society, and language use (Coffin, 2001). Integral to this troika of culture, society, and language use is Halliday’s (1994) notion of language functions (ideational, experiential, and textual) manifest in the notion and use of register which, according to Halliday and Hasan (1989 p. 38-39) is

"a configuration of meanings that are typically associated with a particular situational configuration of field, mode, and tenor. But since it is a configuration of meanings, a register must also, of course, include the expressions, the lexico-grammatical and phonological features, that typically accompany or REALISE these meanings"

Eggins (1994 p.52) considers register "a useful abstraction linking variations of language to variations of social context". Halliday and Hassan (1976, 1989) and Eggins (1994) categorize "context of situation", as those features of context which come to the fore as the language event unfolds itself, in terms of three determinants:

- a. Field: Something that is being talked about.
- b. Tenor: the interlocutors and the relationships between them.
- c. Mode: the form and medium language adopts for communication i.e. spoken or written.

Example: a recipe in a cook book

- Field: cooking (ingredients and process of preparing food)
- Tenor: expert writer to a learner, learner is beneficiary of the advice
- Mode: written, prepared. Text often read as part of process of cooking.

Besides, as Martin (1997) points out, the concept of register entails that there are certain variables which dictate the way meanings are interpreted in texts. An important function of registers is their provision for texts with similar meanings. Some of these texts possess cognizable characteristics that can be used in finding an affinity between contexts of situation and the texts that are created as a result. For instance, legal contracts adopt specialized vocabulary and syntax, while others like business letters have a broader array of meanings and forms. Register analysis have been quite effectively done to understand how meanings are constructed in the creation of texts, and that is why, it is considered a very useful tool for text analysis in the domains of both discourse analysis and language teaching.

Couture (1986, p.1-2) observes that the notion of language as 'social semiotic' has three major implications for further research on writing: First, language should be explained from textual perspectives inclusive of the "extra-textual meanings referenced by language". Second, the text should be considered 'a communicative event rather than something that illustrates a theoretical point'. Third, writing researchers must look 'heuristic universals in explaining textual functions' i.e. they should develop a functional language theory that 'unites the speakers, listeners and situation'.

Following the notion of language as a set of choices, SFL can be assumed to have some very important implications for academic writing pedagogy in Saudi context. Research has indicated that acquisition of academic register for writing is a challenging and time consuming phenomenon (McKay et al., 1997) and this is also true of Saudi learners. Eggins (2004) argues that texts are always context-dependent which otherwise may lead to obscurity in the intended meaning of the written product. In academic context where these Saudi students are required to produce experience through the medium of language alone, the importance of teaching lexico-grammatical sources with focus on form, meaning and use becomes evident as is the need of enabling them create logical relationships between the lexico-grammar and the larger chunks of language i.e. discourse via an appropriate use of register. The use of cohesive devices at the inter-sentence level thus assumes a special place in academic writing pedagogy in Saudi context. This study as mentioned above (3.1.1, 3.3.1) aims to investigate inter-sentential cohesion, especially from the SFL perspectives, which according to Tshotsho (2014 p.426) is a "very useful descriptive and interpretive framework

for viewing language as a strategic meaning making resource", to see how Saudi students employ set of language choices in the creation of texture, and thereby discourse. It may also analyze grammatical and lexical cohesion to find out the variety of academic/rhetorical functions achieved through these cohesive devices.

3.3.4. Clause relations

Texts have identifiable structure which is discernible and comprehensible in textual pattern, lexical signals, inter-clause relations, and lexical and grammatical cohesive links (Cook, 1989). Hoey (1983), also investigated how different parts of a discourse form a unit through manifestation of a variety of rhetorical functions. It posits that written discourse can be analyzed through organization which is prospective, and function that is interactional (Holland and Lewis, 1996). I, therefore, propose to analyze my sample texts to see how cohesion devices operate in rhetorical organization of the argumentative essays.

Clause relations refer to links that exist between clauses within a sentence or across sentence boundaries. The clause relation paradigm classifies patterns in text such as general-particular, problem-solution, or hypothetical-real. Research has shown that readers can identify these patterns and relationships even without the presence of explicit signposting (Hyland, 2002). For instance, in a problem-solution patterned text, the reader would anticipate mention of problem in the introductory part and proposed solution in the latter part of the text. What actually happens is the internalization of text structure as retrievable schemata in the mind of the reader who then uses this schema to infer patterns of information as the text unfolds itself through logical progression. However, research findings (e.g. Hinkel, 2011) have shown that the native speakers or the highly proficient students have the ability to create different types of clause relations without explicitly signposting the relationship pattern. EFL student writers, especially the novice need to be taught how to create a certain clause-relation pattern. A study of cohesive devices in the argument structure, as that of mine, can therefore, unfold how these novice student writers structure their argumentative essays through a variety of rhetorical functions.

As Coulthard (1994b p.7) observes ‘knowledge is not linear, but text is’, structuring and composing a linear text out of a non-linear message can be overtly challenging for Saudi

EFL/ESL students, and can adversely affect their development as L2 writers. Following Kaplan (1966), discourse in Semitic languages such as Arabic and Hebrew is non-linear which entails that an information may or may not link with the preceding or the following. Arabic students, as also observed by Rass (2011), find it challenging to produce linear texts such as in English. This issue with writing competence is supported by the TOEFL and IELTS scores achieved by Saudi students in 2015. As reported in English Language Market Reports: Gulf States - Saudi Arabia (2016 p.12), Saudi students' writing scores on TOEFL were as low as the 9th percentile globally, i.e. within the worst 9 per cent of scores in the world, and for takers of the Academic test on IELTS, writing was the weakest skill with band 4.6.

I argue that cognizance of how grammar and lexis account for connections among sentences, ideas, and then larger chunks of text has the potential to facilitate language comprehension as well as language fluency. Explicit signposting of logical relationships among different clauses of the text through the use of cohesive links, if explicitly made a part of the course design, can be an effective pedagogic strategy for Saudi students to develop their academic writing skills. It is one of the aims of the present study to investigate how cohesive devices function in rhetorical functions typical of the argumentative essay as an academic genre.

3.3.5. Theme and Rheme

The pattern of distribution of words in a clause is represented by Theme and Rheme (Wang, 2007). The Theme, according to Halliday and Matthiessen (2004 p.64) is the clause initial element, “which serves the point of departure of the message; it is the element which locates and orients the clause within its context.” Rheme, on the other hand, is “part of the assembly of the new information that the text offers” (Cummings, 2003 p.133). Johnstone (2002) interprets Theme as Topic and Rheme as Comment, but suggests that the flow of information is from the familiar (Theme/Topic) to the less familiar (Rheme/Comment). The italicized and the underlined parts in the following are examples of Theme and Rheme respectively:

- a. *Barbara* lives in a very nice villa.

b. *That boy in the playground is my best friend.*

c. *In front of my house, there is a huge tree.*

Except for interjections such as “Oh”, nominal groups as are used for movie titles or advertisements, all full clauses possess Thematic structure. In English language, topical Theme is expressed, always in the clause initial position, either by a Subject (S), or Predicator (P), or Complement (C), or circumstantial Adjunct (A) (Bloor and Bloor, 2013).

Themes can be marked or unmarked. Bloor and Bloor (2013 p.83) observes that “Markedness is related to the probability of a word, function or grammatical feature occurring in language use”, and “include circumstantial elements, such as places or times, or they may be participants that are not the subject of the clause” (Martin and Rose, 2007 p.192). Marked Themes facilitate the flow of information by pointing to imminent phases in discourse.

A declarative clause containing ideational information with Subject in Theme position is said to have an unmarked Theme (Bloor and Bloor, 2013). The nominal group may comprise of a single word, or a noun phrase, or a complex group sometimes with an embedded clause.

a. Water is essential for life.

b. This means that the freshness and safety of water are important.

c. Both have been a constant concern from earliest times.

Clauses with more than one Themes called multiple Themes are categorized according to their function: ideational, interpersonal, or textual (Bloor and Bloor, 2013; Fontaine, 2010). Topical themes are always ideational and assume a transitivity role, such as participant, process, and circumstance. Writer or speaker’s attitude or role relationships are created in interpersonal Theme and contain finite verbs in interrogative structures (e.g. *Do you like apples?*) and modal adjuncts (e.g. *probably, evidently, unfortunately*) in declarative structures. Expressions such as *well, anyway* and conjunctive adverbs such as *nevertheless, in other words*, etc are frequently used to demonstrate textual Themes.

Many researchers have adopted the Theme-Rheme framework for analyzing academic discourse. For instance, Lovejoy and Lance (1991) studied academic genres in research articles and North (2005) used this framework to ascertain the extent to which student writers acculturate into their respective discourse community. Theme-Rheme scheme has also been used to analyze textual features that characterize the quality of student writing (Bloor & Bloor, 1992; Christie and Dreyfus, 2007; Schleppegrell, 2004; Vande-Kopple, 1991; Wang, 2007). However, there has been very little quantitative research on Theme-Rheme patterns in academic writing especially in Saudi context.

Nominal, verbal, and prepositional /adverbial groups also realize Thematic structure. However, quite frequently, the Theme of a clause has a nominal structure, and the Rheme in one sentence is condensed to become a Theme in the next sentence. This compact use of thematic progression is often quite daunting for the novice writers and Saudi students are no exception. Viewed from this perspective, Theme-Rheme analysis can help not only raise students' awareness of text structures but also train them produce cohesive and coherent discourse. Students of academic writing such as the Saudi can be exposed to a sample of discourse analysis on Theme-Rheme pattern and then use the same criteria to analyze their own writing and explore whether they organized the information coherently or incoherently. Similarly, the notion of thematic progression can be very usefully exploited in creating logical links between the clauses of a paragraph where information presented in the Rheme can be used as the Theme of the next clause – a feature typical of academic writing. Cohesion is also a defining characteristic of texts (Halliday and Hasan, 1976) and rightly so for academic writing. The Theme has the given information in a clause which, in fact, is a sort of prompt for the reader to anticipate or infer what is to follow. This exercise in logical guessing not only improves the reading experience based on improved comprehension of the text but also helps the students to notice how cohesion can be achieved in academic texts.

3.4. Pedagogic approaches to teaching academic writing

The Product Approach, the Process Approach, the Genre Approach and the Process-Genre Approach constitute the major perspectives informing academic writing.

3.4.1. The product approach

The product approach or prose model approach “focuses on producing different kinds of written products and emphasizes imitation of different kinds of model paragraphs or essays” (Richards, et al. 1992 p.290). Pincas (1982a p.22) mentions four stages that are involved in the product approach namely: familiarization; controlled writing; guided writing; and free writing. The learners are familiarized with the textual features in the first stage. Stage two and three prepare students through teacher input and other scaffolding devices for free writing in the final stage when they ‘use the writing skill as part of a genuine activity such as a letter, story or essay’. Hence the mainstay of the product approach is to foster the knowledge of language structure to be used for imitation of a writing model (Badger and White, 2000). The usefulness of the product approach, especially for the novice writers, in developing grammatical accuracy, lexical base, and text organization using notions of cohesion and coherence is widely acknowledged (Zamel, 1983; Raimes, 1992; McDonough and Shaw, 2003).

However, the product approach has been criticized as it did not account for the stages or processes that were involved in the production of texts (Freedman et al, 1983). Zamel (1983, p.165) found it to be ‘prescriptive, formulaic, and overtly concerned with correctness’. Teaching writing restricted to a preset class of linguistic structures and blind following of template design texts is thus put into a ‘semantic and rhetorical prison’ (Raimes, 1983, p.216). In addition, linguistic competence, the mainstay of the product approach, has to be consolidated by social experience, needs and motives (Hymes, 1972), and therefore, a text which is socially situated “reflects that situation in its lexical and linguistic structure” (Brandt, 1986 p.94). The product approach for its preference for “parallel writing often to a template design” (Jordan, 1997 p.164) fundamentally neglects any explicit focus on the teaching of contextual factors in writing and restricts students “in what they could write or how they could write it” (ibid).

Viewing the product approach as a manifestation of competence in form and structure, Oraif (2016 p.99) observes that "writing classes in KSA have tended to be an extension of grammar teaching". The early stage writers do parallel writing where they substitute a few

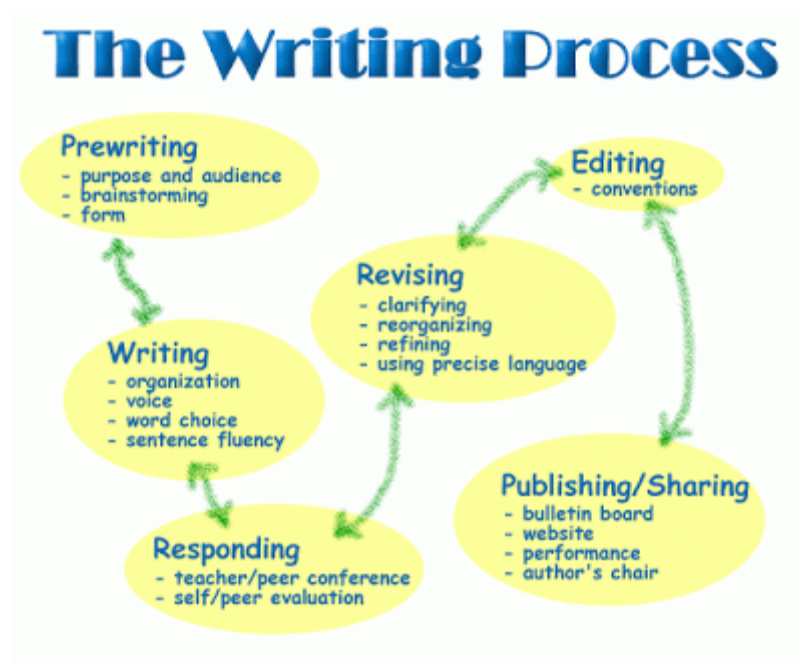
lexical items to produce a parallel text in imitation to the model in the textbook. This could be useful as an awareness raising activity but is primarily a mechanical exercise as it does not focus on other aspects of writing such as the processes involved, the linguistic features, the lay out and the design of the text etc. Even at the higher level of instruction, the product approach fails to account for socio-cognitive and contextual factors that prompt the use of certain lexical and grammatical choices in the production of discourse. This study, therefore, proposes to collect teachers' and students' perceptions via interviews and surveys to investigate the social, cultural, and pedagogic issues that account for the use or misuse of lexico-grammatical choices in students' academic writing. The findings will then be triangulated with the results of the textual analysis to determine the effect of extra-linguistic elements in text formation.

3.4.2. The process approach

Writing as a language skill is expected to be an 'explanatory and generative process whereby writers discover and reformulate their ideas as they attempt to approximate meaning' (Zamil, 1983 p.65). Hence the focus of writing pedagogy moved from the final product to the cognitive processes which help to produce written discourse. In the process approach, language study skills such as *pre-writing*, *brainstorming*, *drafting*, and *editing* take preference over knowledge of language systems such as *grammar/syntax* and *lexis* (Badger and White, 2000; Gee, 1997; Keh, 1990; Uzawa, 1996; Zhang, 1995) since surface-level correctness has proved to be "of little value" in helping students learn to write and the mastery of textual structures had little to do with "the creative process of writing" (Zamel, 1976 p.28).

The process approach is considered "the most successful in the history of pedagogical reform in the teaching of writing" (Matsuda, 2003 p. 69) as it not only allows students the chance to understand, acquire and practice language study skills, but also employ their previous knowledge base and experience in the enhancement of their written discourse (Badger and White, 2000). There are, however, different classifications as far as the writing stages are concerned, but a typical process includes four stages: prewriting; composing/drafting; revising; and editing (Tribble, 1996 p.39).

F2-LR: The writing process in process approach to writing



<http://reformschoolsandreaechuga.blogspot.com/2009/03/writing-process-approach.html>

retrieved: 19/9/2014

One of the many merits of process approach is that it gives students sufficient time and autonomy to express their ideas and prefer their choices which is something missing in, for example, the product approach to writing. Since the focus is on achieving fluency and not very high level of accuracy, students' nervous anxiety is under good check. They can freely use language to discover, to express, and to share their perceptions and experiences.

Teacher-conferencing and peer review are commonly used feedback measures. Similarly, teaching effective strategies at each stage of the writing process becomes an important component of a writing class (Zen, 2005).

Process approaches have been criticized for their "somewhat monolithic view of writing" (Tribble, 1996 p.104). The process of writing does not account for what is being written, who is writing, and what is the academic level of the writer. For instance, prewriting for an argumentative essay is far more exhaustive than it is for a postcard, but process writing does not account for this. In addition, as Badger and White (2000) point out, the process approach

does not provide for comprehensive linguistic input that can help students to produce proficient texts. Horowitz (1986) points out that since all stages of the process approach cannot be employed in an examination setting where the product not the process is assessed for academic achievement. More importantly, genre, the background setting for the text, and the writer's purpose are not properly differentiated in this approach. Likewise the product approach, the process approach does not supply sufficient room for the functional aspects of language use. There is much criticism against its overemphasis on the psychological processes and disregard to the socio-cultural context (Al-Khatib, 2017). Genre-based writing pedagogies, thus, appear to be the relevant choices which may fill in this pedagogic gap by targeting socio-cultural variables. Hence, I am interested in using questionnaires and teacher interviews to gauge the beliefs of the teachers and the students about the socio-cultural aspects and pedagogic practices to ascertain their role in the use of cohesive devices in academic writing. The current pedagogic practices that may involve product and process approach may be investigated to arrive at some relevant insights about the EFL context in Saudi Arabia. However, the main focus will be on analyzing cohesive devices in argumentative essays i.e. a specific genre with its specific text organization and academic functions.

3.4.3. Genre-based academic writing

How to suitably respond to diversely recurring situations in everyday life such as shopping lists, emails, job applications etc. is facilitated by the concept and application of genre which, according to Hyland (2000) - one of the main exponents of genre-based pedagogy and EAP - is collection of rhetorical choices. Significance and centrality of genre in academic writing pedagogy is a widely accepted phenomenon (Breeze in Ruiz-Garrido, et al. (Eds) 2010 p.181). McCarthy and Carter (1994) suggest that a group of texts based on frequently recurring prototypical features may be referred to as genre. Eggins (1994), following SFL traditions, elaborates on this concept and states that genre as a general framework aims at providing rationale to various types of interactions which can be adapted to the specific needs of different contexts of situation they target. Textual meaning emerges from not only "the meaning contained within the discourse," but also "from the meanings of genre, or the meanings about the conventionalized social occasions from which texts arise"

(Leckie-Tarry, 1993 p.33). Student writers, therefore, should be trained to take hold of those frequently used genres which facilitate the construction of culture (Martin, 1986 in Bruce, 2008; Delpit, 1988 in Candlin and Mercer (Ed) (2001).

There are three major perspectives on genre: A Systemic Functional View represented by Chrisite, Hasan, Martin, Rose, Eggins etc.; An ESP perspective represented by Bhatia, Hyland, Paltridge, Rothery, Swales, etc ; and the New Rhetoric School as found in the works of Bazerman, Elbow, Freedman, etc. .

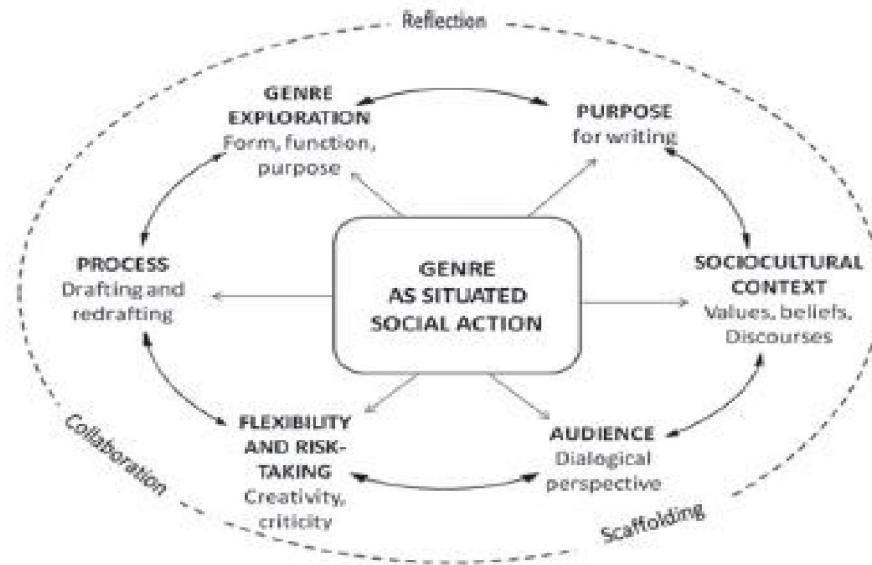
3.4.3.1. Genre in SFL

SFL presents genre as "the system of staged, goal-oriented social processes through which social subjects in a given culture live their lives" (Martin, 1997 p.13), and is identified as being synonymous with 'context of culture' as register is synonymous with 'context of situation' (Bruce, 2008). Genres are created when lexico-grammatical features of language facilitate the process of contextualization of broad social purposes (Christie and Martin, 1997). Thus genres manifest themselves in a variety of texts or it can also be said that any socio-culturally situated text adheres to either one or multiple genres. However, there is structural variation in texts of the same genre. The only exception to this feature "is the obligatory elements and dispositions of the GSP - genre specific potential" (Halliday and Hasan, 1989). Bruce (2008, p.13) mentions that the SFL approach to genre targets texts as:

- a. Schematic structures described by Eggins (1994, p.36) as the 'staged, step-by-step organization of the genre;
- b. Linguistic (lexico-grammatical features): such as syntax, lexis, types of cohesion and reference (which relate to the elements of the schematic structure)

F3:LR: Genre as situated social action

Figure 3. Genre as situated social action



http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0123-48702012000200002

SFL, following Halliday's (1994) framework, explores genres in terms of texts with identical set of formal linguistic features such as found in narratives, recounts, arguments, and exposition. These micro genres which individually comprise of frequently recurring series of stages and which Martin (1992) calls *elemental genre* not only convey the overall purpose of the target genre but also combine with other micro-genres to form macro-genres. For instance, a research article may be a mix of an exposition, a discussion and a rebuttal. Elemental genres have two important pedagogical implications: first, they let the students use their background knowledge of elemental genre to write different types of macro genres, for instance, knowledge of writing a *process/procedure* can be used for writing *lab reports* ; secondly, the teachers can help the students to perform complex formation of genres, gradually though. For example, use of imperatives employed in writing procedures can be extended by adding a conditional clause to conform to the generic style of *instruction manuals* ('*if the pressure reaches 195 then open the release valve*'). The writing course designs at the English Language Center at Yanbu (ELCY) - the research site for the collection of sample for my study - are developed in the light of the government policy (MoE, 2005). Saudi students are taught to produce recounts such as past vacation, narratives, procedures such as recipes or mechanism description, reports such as incident/accident, and

explanation which may include a variety of tasks. However, these writing genres are restricted to the course level; for instance, technical reports, mechanism description and explanations are expected only from undergraduate students.

3.4.3.2. Genre in ESP tradition

Genre in ESP perspectives moves away from the analysis of lexis and grammar to include analysis of "rhetorical moves" and "rhetorical context" thereby, responding to as well as forming social contexts and socializing writers (Paltridge, 2014 p.303). Swales (1990) understands genres as comprising of a set of structured communicative events linked by broad communicative purposes commonly adhered to by specific discourse communities. An important implication of practicing genres in diversity of contexts and purposes is that in the process of learning, using, and adapting a genre ensures discipline specific membership for the users. From pedagogic point of view, this feature of genre can help teachers ascertain and figure out the communicative needs of their learners for every step in the construction of genre will open a window into the learning progress students are making and how relevant genre knowledge is to them.

In addition to complexities in comprehending communicative purposes, genres can also be challenging for the complexity of their generic patterns across academic disciplines (Bhatia, 1998 in Bruce, 2008 p.34). He recommends a recourse to a comprehensive system of linguistic analysis in order to appropriately describe different generic patterns across academic texts. These include “situational/contextual analysis and discursive perspectives, and ethnographic analysis” Bhatia (2004, p.164-65). The purely linguistic approach, which this study aims to adopt, may include rhetorical analysis based on different stages and moves of the text to identify and explain the behaviour of cohesive devices in each stage and move (Martínez-Lirola and Tabuenca-Cuevas, 2010 p.29-42). Genre analysis from Bhatia’s (2004) perspective may also investigate the ways target texts are patterned as an alignment of rhetorical units or moves. Every move in the sequence is an identifiable communicative entity created for a specific communicative function and can be broken down into various ‘steps’. Moves as well as steps can be optional, blended with others, recurring, and may show constraints on the sequence in which they occur (ibid). I intend to use Hyland's (1990)

framework to analyze the use of cohesion in the argument/rhetorical structure i.e. in the stages and moves of the argumentative essays of Saudi EFL students.

3.4.3.3. The New Rhetoric view of genre

The 'New Rhetoric' approach finds genres as fluid and dynamic (Hyland, 2006) and as typical rhetorical actions which are materialized by the forms of discourse and as feedback to repetitive situations or contexts (Coffin, 2001). According to Miller (1994, p.24) genre is "a social action centered not on the substance or the form of the discourse but on the action it is used to accomplish". This shifts the focus on the specialized use of genre for performing socially situated functions and also on the evolutionary stages in the development of genre. New Rhetoric then involves other paradigms into the concept of genre such as the institutional, ideological and physical contexts, and thereby provides an insight into the mechanism that affects the members of discourse community as well as the scope for successful communication. Since genres are potentially models and not absolute linguistic systems, their usefulness in teaching has cast doubts among many a researcher. For instance, Freedman and Adam (2000) argue that the use of genre in classroom contexts relegates them from the role of communication resource to a mere object of study. New Rhetoric thus perceives genre as a powerful framework for the development of communication skills, and pleads for avoiding those pedagogic methods that reduce the text to preset templates.

The claim of SFL and ESP that linguistic sources are genre specific is not supported by empirical research, for example, conducted by (Paltridge, 2014 p.303) who found no direct association between the two. Bruce (2008) refers to three important elements of a genre based approach that could be exploited for teaching result-oriented academic writing: "the social motivation and socially constructed elements of genre, cognitive organizational structures, and the actual linguistic realizations of the discourse" (p. 36). My research will be focused on exploring "the actual linguistic realizations of the discourse (ibid)" to find out how the students' use of the lexico-grammar establishes semantic relationships for textual unity. The socio-cognitive elements impacting genre may also receive some attention in the process of text analysis.

Genres have typical rhetoric patterns, organizational structures, and stylistic features (Harmer, 2001). Following Oraif (2016), genre-based academic writing pedagogy in contexts like Saudi EFL can, therefore, not only raise awareness of the learners but also equip them with requisite linguistic features whereby they could produce well-formed sentences and discipline specific texts. An investigation into the nature and use of cohesive devices in argumentative essays is likely to serve this end. The students will have a strong realization of what they are writing, what for, and whom for on the one hand, and a sort of psychological relief that academic writing is not just teachers' tool of assessment, on the other hand (Curry and Hewings, 2003). Hyland (2002) refers to the teaching of explicit grammar which in genre-based approach is an all inclusive term to cater for text construction and organization in respect to the purpose, audience, and message. Martin (1989) recommends the teaching of 'factual genres', which include procedure, description, report, and explanation. The typical features of factual genres are the recurring patterns of transitivity, use of reference and conjunction etc. In this context, students who plan expository writing can be instructed in the use of Thesis-Argument-Conclusion structure, for example (Rothery, 1989).

One of the main aspects of academic writing is that it prepares students move away from "knowledge display to knowledge construction" (Delaney, 2008 p.140) and, to this end, genre-based approaches are adhered to. However, the relevance of genre-based pedagogies has been suggested for contexts where academic writing is being practiced on a short-term basis such as one-off workshops or orientation courses (Cargill, 2004). In contexts where it is feasible to spread academic literacy programme over, for instance, a semester, it is possible for EAP teachers to gain more from the reading and writing process (Dovey, 2010).

There is a danger, however, in following genre-based approach too stringently and prescriptively which is likely to lead students assume genres as set of rules. This will hamper students' progress from becoming novice to mature writers as the meaning making potential of genre will be lost in the face of strict adherence to rules and generic patterns. Genres are not fixed templates to be filled in by some auto-generated process rather they are means to achieving an end which in the present case is creation of texts appropriate to the conventions of the discourse community the writer belongs to. A pedagogy which excludes

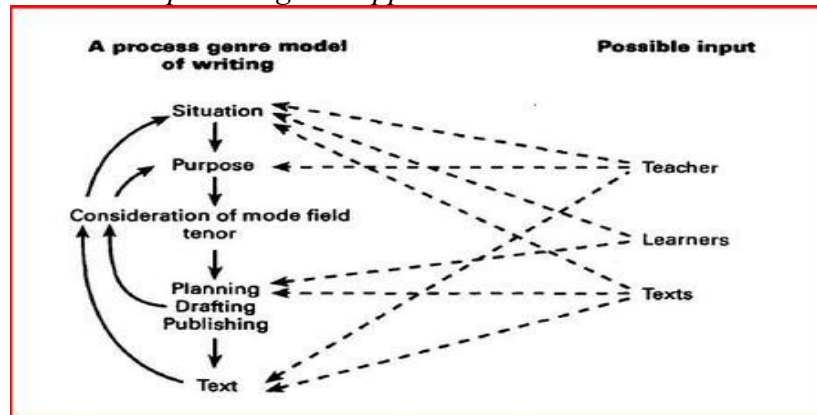
students from their social, cultural, and academic contexts cannot yield appropriate academic discourse.

A recent challenge to genre-based writing pedagogy has come from multimodality of the present day texts especially in the science subjects which are embedded with visuals or graphic organizers. This inclusion of ‘visual literacy’, as Hyland (2006 p.53) points to, has a grammar of its own with comprehensive meaning-making potential. Genre-based approaches focusing primarily on linguistic features of texts are now being challenged by this new holistic meaning-making concept of multimodality. This entails that teaching of academic writing will have to help students with exploitations of visuals such as the graphs, charts, table, and diagrams with as much emphasis as traditional texts are taught. Kress and Van Leeuwen (1996) in Hyland (2006, p.53-54), for example, illustrate how visuals convey meaning via such forms as “point of view (whose perspective is taken), given-new structures (understood versus new information), visual transitivity (who is doing what to whom), deixis (then and now), and modality (is it true or false?)”. These devices allow EAP teachers to demonstrate how visuals have been arranged for optimum effect and how the patterning of visual graphics may change from one culture to the other.

3.4.4. The Process- Genre Approach

Badger and White (2000) attempted to synthesize the product, process, and genre-based approaches to introduce The Process-Genre Approach. Their model is based on the assumption that an eclectic framework for writing should create text out of a specific situation which is a composite of a series of stages with teachers scaffolding learning outcomes through input of relevant knowledge and skills. The figure below illustrates how the process-genre approach operates.

F4-LR: The process-genre approach

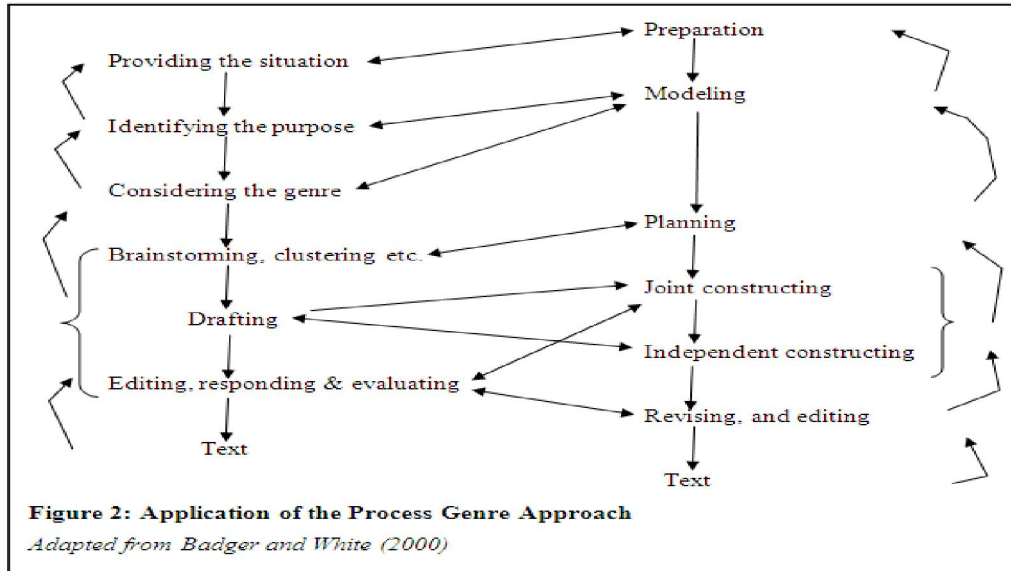


Badger and White (2000 p.158) seem to expect a range of generic functions and diversity of knowledge and skills from the students. As an example, they present a classroom situation where learners simulate the role of estate agents to write descriptions of a house on sale. The learners "should then draw on their linguistic skills, for example, vocabulary, grammar, organization and use appropriate skills, such as, drafting, redrafting and proofreading to produce a description of a house which reflects the situation from which it arises" (ibid). To complete this task, they will have to take care of the following:

- a. Purpose: to sell a house
- b. Tenor: the text must interest those interested in the purchase
- c. Field: relevant information providing some detail about the house
- d. Mode: ways such as the lay out, design of the description as well as the linguistic features appropriate to the description

Yan (2005, p.21-22) adapted Badger and White's (2000) model and proposed a six-stage procedure comprising of preparation, modeling and reinforcing, planning, joint constructing, independent constructing and revising to illustrate how teachers manipulate recursive procedures to teach different writing stages in a classroom situation.

F5-LR: Yan's (2005) model of process-genre approach



Although the process-genre approach aims at both tapping students' potential and providing them with useful input, there are some serious concerns as to its uniform application in a given classroom context such as in Saudi Arabia. Elyas and Badawood's (2017) observation that "cultural identities" may impact "teacher and learner identities" in Saudi Arabia may have serious implications for a writing course design. Saudi learners come from diverse backgrounds with visible differences in background knowledge, skills level, and learning preferences. A very comprehensive needs assessment is needed to ascertain all these variables as well as different type of teacher input will be required to satisfy learners' needs. Given the classroom dynamics and constraints which academia puts on it in the form of preset textbooks, pacing schedule, and assessment practices, it will be quite daunting for the teachers to practice such a conclusive approach in true spirit.

Nevertheless, the process-genre approach has viable intentions if we consider that "writing performance is as much a result of students' use of strategies in various processes of writing as it is of their handling of the language" Yau (1991) in Yan (2005, p.20). Similarly, keeping in view that good academic writing should "unite form and content, ideas and organization, syntax and meaning, writing and revising, and above all, writing and thinking" (Raimes, 1983 p.266), the process-genre approach appears very relevant and effective.

The present study plans to investigate the use of cohesive devices in argumentative essays which is a genre quite common at the undergraduate level in Saudi EFL contexts (Hamed, 2014). The

proposal is to find out different patterns of cohesive links that are observable in the texts at the intersentence and discourse level. Both grammatical and lexical cohesive devices will be analyzed to see how Saudi students use cohesive devices in the rhetorical structure and conform to the requirements of the target register and genre. In addition, the study will also include use questionnaires to gauge students' and teachers' perspectives relevant to these abovementioned issues and more specifically to cohesive devices and academic writing.

3.5. The argumentative essay as genre in academic writing

One of the key functions of writing pedagogy in academic contexts is to facilitate students gain membership of their specific discourse communities via acquisition of the contemporary practices in the domain of academic literacy. This entails that the students should be trained, through awareness raising and practical tasks, in developing familiarity with and expertise in a variety of text types or genres they will encounter in their academic life. One such genre is the essay which Hyland (2009 p.132) calls “acculturation practice” and aims at developing descriptive, analytical, and critical skills of the student writers through exposition and argumentation. Its significance for undergraduate students can be seen from the fact that it not only develops their academic knowledge but also socializes them to assimilate socio-culturally embedded literacy conventions (Hyland, 2009). Tankó and Tamási (2008) also refer to the centrality of argumentative essay in the academic discourse across the globe and the fact that it is quite challenging for the learners to produce an acceptable piece of argumentation. This is relevant to Saudi EFL context where undergraduate students are taught how to write academic essay such as the descriptive, the reflective, and the argumentative (Oshima and Hogue, 2006). Argumentative essays have greater importance than other types since they form a culminating point in students' development of the essay writing skill and integrate all the skills that are used in other essays. For instance, the students can use different rhetorical patterns such as compare and contrast, cause and effect, etc. to support or refute their argument. Similarly, they can use their previously learnt language, for example, formulaic expressions for making opinions and claims. More importantly, the argumentative essay prepares students for more specialized writing at further level of their subject specialism. But as pointed out by Tankó and Tamási (2008), argumentative essays have been observed as academically daunting to the Saudi students also.

Typically, an argumentative essay involves a debatable topic that can invite arguments in favour and against the topic as well as the writer's specific stance on the subject. The content is derived from multiple resources such as the library, surveys, observations, background knowledge etc. Several rhetorical strategies such as the use of exemplification, comparison-contrast, fact-figure, cause-effect patterns are employed to make the argument persuasive. According to Chala and Chapetón (2012 p.28) "their purpose is to convince, get an adhesion, justify a way to see facts, refute interpretations about an event, or persuade the reader to change an opinion about a subject".

Argumentation as a sub-genre of the academic essay involves controversy usually stated in a proposition statement. According to Tankó and Tamási (2008), pedagogy typically employs four types of questions to resolve conflict in the argument: fact, definition, values and policy. In this traditional model of argumentation, questions of fact pertain to existential or factual information; questions of definition classify issues as they are; questions of value assign salience to things or concepts; and questions of policy identify actions about how to figure out the controversy. The table (T1-LR) below in Tankó and Tamási (2008) outlines different schematic structures form different scholars:

T1-LR: Schematic structures in argumentation

Graves & Oldsey (1957)	Eckhardt & Stewart (1979)	Fahnestock & Secor (1990)	Fulkerson (1996)
Questions of fact Questions of definition Questions of probability Questions of value Questions of policy	Definition Substantiation Evaluation Recommendation	Categorical propositions Causal propositions Evaluative propositions Proposals	Substantiation Evaluation Recommendation

Argumentation has been discussed in different scholarly conventions such as in logic (Toulmin, 1958) for its potential for reasoning and analysis, in contrastive rhetoric (Kaplan, 1966, 1988; Connor, 1996, 1997, 2004) for its emphasis on text organization patterns and cultural variations, in World Englishes (B. Kachru, 1992; Y. Kachru and Smith, 2008) for its realization in different varieties; and critical linguistics (van Dijk, 1993) for its adoption of socio-politically motivated

discursive practices; and in cognitive linguistics (Carrell, 1982) for the underlying schema that determines comprehension and organization of discourse. However, it was in SFL (Martin, 1992, 1997, 2001; Eggins, 1994, 2004) and the ESP (Hyland, 1990, 2004, 2006, 2009; Swales, 1990, 2004) traditions that argumentative essay found its most comprehensive description and analysis. In SFL theory, register or context of situation and genre or context of culture determine which shape and meaning the text will assume. In other words, choice in terms of language features within one text as well as between different texts comes from the contextual factors so that the meaning is realized in ideational (writer's world view), interpersonal (engagement of the writer with the audience) and textual (about texture and text organization) metafunctions. Humphrey et al. (in Mahboob and Knight (Eds.), 2010 p.185-99) refers to the linguistic features of students' academic writing in Table T2-LR:

T2-LR: Linguistic features of students' academic writing

Ideational metafunction	Interpersonal metafunction	Textual metafunction
transitivity selection, patterns of clause complex, lexical density, grammatical intricacy and nominalization	Graduation, Attitude and Engagement resources as in the appraisal theory	macroTheme, hyperTheme, and Theme-Rheme structures.

3.5.1. Hyland's (1990) model of the argumetative essay

Hyland (1990) mentions that the generic structure of an argumentative essay, which this study aims to adopt for cohesion analysis, is realized in three stages: Thesis, Argument and Conclusion. The overall generic structure spills down to create more micro-structures in each stage which can be named moves. These moves may be essential or optional elements in the system of argumentation. Lower down the hierarchy of these moves is the lexico-grammatcial system which transforms these moves in different forms. Hence, producing an argumentative essay in academic contexts becomes a multifaceted activity involving various dimensions of cognition, rhetorical traditions, linguistic system, and socio-cultural context.

A number of studies have adopted Hyland (1990) model for analysis of the argumentative texts, especially in academic settings. These studies attempt a partial use of the model such as that of Henry and Rosemary (1997) which applied Hasan's (1989) terms to analyze introductions and

conclusions, and then compared the rhetorical moves with Hyland's (1990) model. Similarly, McGee (2014) investigated rhetorical features of moves at the paragraph level. An important study by Schneer (2014) analyzed the rhetorical structuring of the argumentative opinion blog entries on Hyland's (1990) model. The study found significant variation in the rhetorical structure which challenges the three-stage Hyland (1990) model commonly used for pedagogic purposes. Imtiaz and Mahmood (2014 p.99) used Hyland's model (1990) as the analytical framework to analyze the move-step structure of the argumentative essays written by Pakistani students. They, however, found the model effective for teaching argumentation. Besides they were able to identify "contradiction" and "suggestion" as new moves that were not part of Hyland's model. A comparative study conducted by Liu (2015) also used Hyland's (1990) model to examine the moves and wrap-up sentences in the concluding paragraphs of English expository essays produced by three groups of Chinese students; first year, second year and third year. For this purpose 184 essays were analyzed and the results exposed that there were differences in using moves in Chinese rhetorical structure in writing a concluding paragraph in comparison with English model essays. Boukezzoula (2016) used Hyland (1990) model for move analysis to see the usefulness of the model for pedagogy. Recently, Malekie and Moghaddam (2017) used this model as a treatment for their experimental research group to discover the effectiveness on pedagogy. The results did not reveal any significant differences in the performance between the control and the experimental groups. Kaneston et al, (2017 p. 39) study which applied Hyland's (1990) model revealed a list of moves and steps which were signaled by the linguistic features. The results indicated that the moves used by the pre-university students in the study did vary from the model as new moves were marked in each stage.

The study of linguistic features such as cohesive devices in relation to the moves and stages in Hyland's (1990) model is missing from most of these studies. I, therefore, decided to use this model to find out how cohesion functions in the rhetorical structure of the students' argumentative writing. I believe this attempt to be the first of its kind which may motivate further research initiatives.

3.6. Research into the Academic Writing of Arab EFL Learners'

Research into the academic writing in Arab EFL context though not much exhaustive covers a wide array of relevant interest such as linguistics features, discourse analysis, learners' problems, pedagogical trends, syllabus and course design, classroom dynamics, language assessment, academic genres, social and cultural matters, attitudes and motivation, writing strategies etc. Analysis of errors and syntax has been the primary focus of many studies in Arab EFL context (Alam, 1993; Al-Juboori, 1984; Doushaq and Al-Makhzoomy, 1989; Halimah, 1991; Kharma and Hajjaj, 1989). Khan (2011) tried to identify the writing problems of Saudi undergraduate students and discovered that students' texts abound in mostly grammatical errors such as those of word order and structure, tenses, subject-verb agreement. However, this study did not account for macro or discourse features of students' writing. Another research by Javed and Khan (2014) attributed academic writing problems of Saudi university students to limited lexical range, paucity of ideas, text structuring, and micro level features of grammar such as the articles and prepositions. In another study, Saud (2015 p.440) observed that

"Saudi students of English, find it very difficult to construct a coherent written essay in English. The difficulties lie not only in the poor organization, the inappropriate thesis statement, the inadequacy of providing examples and details, the limited vocabulary but also the misuse of cohesive devices".

These studies are, however, attributive and not prescriptive. They simply report the findings empirically, and neither describe the source of the problems nor prescribe any practical solutions. Moreover, their approach is purely based on micro-level analysis, and discourse analytic features, appraisal of the socio-cultural variables, register and genre analysis are missing. The present study will attempt to include discourse features to see specifically how Saudi students of academic writing use cohesive devices in the creation of appropriate academic register and genre while writing argumentative essays.

Fageeh and Mekheimer (2013) indicate that there is no such thing called awareness-raising which could focus attention to how students, especially EFL students, develop their academic writing skills. This refers to the 'deficit pedagogy' in Arab contexts and one of the aftermaths of such a deficit is that the process of learners' acculturation into their discourse community is impeded. It might also delay acquisition of relevant language skills and linguistic competence which the students need for production of their writing tasks. Alam (1993) identified negative

transfer as responsible for low level of writing proficiency of the Arab students who could mostly produce only one paragraph in response to an essay writing task. This points to limited syntactic and lexical resources, knowledge of rhetorical organization and content, and inadequate use of the writing skills and strategies. Halimah (2001) found that students' writing problems occurred not because of linguistic errors but because of inappropriate use of features of text organization. The main cause for this issue, according to the researcher, was an overemphasis on teaching grammar and vocabulary while ignoring rhetorical organization of the texts altogether. This implies that Arab learners may have serious issues with identification and application of the rhetorical patterns that organize the flow of discourse. Since cohesive devices are lexico-grammatical and semantic resources of creating texture and are equally significant in organizing the flow of discourse through rhetorical functions, a study of cohesive devices in academic writing is much needed in Saudi EFL context to gauge both students' strengths and weaknesses, and thereby ascertain the extent to which these linguistic features account for textual appropriacy in regard to academic essays. Rass (2015 p.49) found that Arab students:

by the end of their first school year, most of them succeed in writing topic and concluding sentences. However, (1) providing supporting details including examples and reasons is not fully mastered; (2) the style of English is not completely acquired: Some students continue transferring the style of Arabic writing; and (3) developing a cohesive paragraph using the right coordinators and transition words still needs a lot of practice.

A study by Al-Hazmi and Schofield (2007 p.237) researched about the impact of peer feedback and revision strategies on quality of writing. The researchers found out that the students 'were not ready to abandon the traditional surface error focus of their classroom' in spite of the serious pedagogic input. In another study, Al-Khuweileh and Al Shoumali (2000) investigated relationship between proficient and non-proficient writing in English and Arabic of Jordanian university students. A strong correlation was discovered between English and Arabic texts which indicted L1 transfer both at the linguistic and the strategic levels. But, this research did not account for the negative transfer that caused errors of form and organization in students' writing. Besides the writing research areas discussed above, there are various studies in Arab EFL context that explore teaching and curriculum related issues. Issues with writing syllabi and course materials that do not cater for the actual needs of the learners have been frequently reported (Al-Hazmi, 2006; Bersamina, 2009; Khan, 2011; Zughoul, 1987).

3.7. Critique of the research studies in the Arab EFL context

It can be inferred from the result findings of the aforementioned studies that academic writing in Saudi context involves a holistic inclusion of both the local and the global features which inform writing skills in EFL contexts. These studies refer to the paucity of awareness-raising focus in both pedagogy and instructional material (Fageeh and Mekheimer, 2013) without which students can neither be motivated to learn nor made aware of the purpose and outcomes of learning. Equally important is the need for the adoption of an eclectic approach to teaching academic writing on the part of the teachers to make learning of the writing skill a worthwhile experience for the learners. To this end, it seems that a mix of approaches especially process and genre based pedagogy can produce fruitful results. Knowledge of different text types in academic settings and their language features, rhetorical patterns, and communicative function is very likely to enable Saudi learners produce subject-specific models of writing to the satisfaction of their discourse community. One effective approach could be to adopt what Martin (1984) calls mode continuum which is about a linguistic model that incorporates teaching activities sequenced from the most situationally-dependent to the least situationally-dependent. This would provide an opportunity whereby novice writers can experience gradual progression in their writing skills via carefully chosen lexical, grammatical and semantic elements as well as generic knowledge to produce socially situated written discourse.

All things being equal, it is evident that writing as finished product is the ultimate object of assessment and analysis. What is manifest on the surface is the language, and thereby the text which the student writers produce. Seen from this perspective, it can be argued that awareness-raising, use of skills and strategies, cognitive processes, knowledge of society and culture, the aims and objectives of literacy etc. all merge to aid the production of appropriate language in the creation of genre-specific discourse. Hence, creation of texts in conformity with the conventions of the academia seems to be the prime objective of academic writing pedagogy. Among the linguistic features especially the lexico-grammatical and semantic, cohesive devices, the object of the present study, occupy central importance in the creation of texture which is, in fact, the defining property of any text (Halliday and Hasan, 1976). Effective use of cohesive devices is indicative of the grammatical, lexical and semantic range of the learners as well as of their

knowledge of register, genre, rhetorical organization, negotiation of meaning and communicative purpose. In other words, successful writing experience is facilitated by the use of cohesive devices quite significantly. The following section will dilate upon the concept of cohesion and cohesive devices and how these cohesive devices manifest themselves in academic genre such as the argumentative essay. The mainstay of the discussion will be from SFL point of view, but other perspective such as the CRT, Cognitive Theory, ESP, etc. will also be explored to develop further insights on the topic.

3.8. The concept of cohesion

Cohesion is a property of text, either spoken or written, that employs grammatical or lexical resources to produce a connected piece of text. Crystal (1987, p.119) observes that cohesion is about “how the sentences of a text hang together”. However, Halliday and Hasan's (1976) account of the concept remains the starting point for any discussion that involves the study of cohesion till to date. Cohesion, according to Halliday and Hasan (1976 p.4), being semantic in its orientation signifies meaning relations in a text, and is achieved;

where the INTERPRETATION of some element in the discourse is dependent on that of another. The one PRESUPPOSES the other, in the sense that it cannot be effectively decoded except by recourse to it. When this happens, a relation of cohesion is set up, and the two elements, the presupposing and the presupposed, are thereby at least potentially integrated into a text.

Halliday (1994, p.309) further states that cohesion is a paraphernalia for developing associations beyond the precincts of grammatical structure. These lexicogrammatical systems which are a manifestation of the textual metafunction culminate in the system of cohesion (Halliday and Matthiessen, 2004; Matthiessen et al. 2010). Cohesion, thus, is a non-structural property of text which involves relationships between different textual components in a manner that the meaning is only recoverable when identified with some other linguistic entity in the text. This suggests that there are elements in the text which cannot be understood except by recourse to some other element in the text. However, it must be borne in mind that it is the relation between the elements or items and not the item itself that helps in the interpretation of the text. This item dependency in regard to text interpretation is the key to understanding the concept of cohesion (Halliday and Hasan, 1976).

Presupposition establishes an assumed relationship between the addressor and the addressee, and when this relation exists, a cohesive tie is created between them. Cohesion in a text then is the total sum of these cohesive devices. Presupposition exists at three different levels: the semantic, the grammatical, and the lexical (Christiansen, 2011 p.19). At the semantic level, cohesion is derived from the meaning of the message that underlies the text; at the grammatical level, cohesion relates to the structural functions that words have when they configure in a string of relationship in sentence or text; cohesion at the lexical level pertains to the denotational meaning of the individual words. Since a text is a manifestation of the writer's purpose within a given linguistic and contextual parameter, use of cohesive devices, thus, becomes an indication of how semantic associations are build up through the use of grammar and lexis as the text transforms and unfolds itself as a piece of discourse. The existence of the relationship between the presupposing and the presupposed elements of the text is vital to the readers' appropriate comprehension of the writer's purpose. Hence, the absence of cohesive element in a text can adversely affect text coherence, and thereby the textuality of discourse as being synonymous with its specific discourse community. I am particularly interested in exploring these semantic associations, and my research aims to investigate the role of intersentential cohesion in the creation of texture and in the rhetorical structure of the argumentative essays of Saudi EFL undergraduate students.

Cohesion studies which initially began with investigating non-structural resources in the creation of text gradually moved on to explore the semanticity of cohesive ties and their significance in discourse structure. Halliday and Matthiessen (2004 p.532) refer to the semantic and contextual resources which are outside the domain of lexicogrammar but contribute to the creation and interpretation of the text. Martin (1992, 2001) interprets cohesion from the perspective of discourse semantics. He seems to be inspired by stratificational linguists, and thereby evolves his own taxonomy of cohesive relations different from Halliday and Hasan's (1976) reference, substitution, ellipsis, conjunction, and lexical cohesion. For him, cohesion originates from a system of discourse semantics but is supra lexicogrammatical in its function with its own metafunctions. He reworked Halliday's non-structural features considering them as semantic systems about discourse structure. He proposed the following categories: identification, negotiation, conjunction, and ideation.

Cohesion operates at both the intrasentence and the intersentence levels. Cohesion at the former level is less noticeable in the presence of grammatical structures (Beaugrande and Dressler, 1981; Christiansen, 2011; Halliday and Hasan, 1976). However, the sentence as the highest unit of grammatical structure may use pronominalization to express intra-sentence cohesion. Hoey (1991), on the other hand, postulates that intrasentence cohesion should be understood as existing not within sentence but among clauses or clause complexes. Analyzed from this perspective, intra-sentential cohesion may be a viable analytical strategy for texts which employ longer stretch of clauses such as the legal ones. Academic texts of novice writers with short simple or complex sentence structures can be better analyzed at the inter-sentential level because of the proximity of semantic relationships between the preceding and the following clauses. Nevertheless, it is the intersentence cohesion that is significant because that represents “the variable aspects of cohesion, distinguishing one text from another” (Halliday and Hassan, 1976 p.9). Here, we can infer that Halliday and Hasan refer to the potential of cohesion as determinant not only of the register but also of the genre. This motivates me to explore the varied use of cohesion devices in their attempt to create texture in text as well as their configuration in the argument structure to achieve rhetorical functions typical of the genre i.e. the argumentative essay.

3.9. Theoretical perspectives on cohesion

Major contribution to studies on cohesion comes from SFL and in the works of Halliday, Hasan, Martin, Martin, Rose, Christie, Eggins, Thompson, Matthiessen, Hoey etc. There are then Contrastive Rhetorical, Cognitive Linguistics, and English Language Teaching perspectives on cohesion which though mainly derive their theoretical insights from Halliday and associates, describe the subject from their specific perspectives.

3.9.1. Cohesion in SFL traditions

SFL through its repertoire of metafunctions operates at both the syntagmatic (arrangement of language items in a larger unit) and paradigmatic (context-dependent potential substitution of language elements) levels (Martin and Rose, 2007). SFL is all about making contextually meaningful choices which together make system. A system is realized in system network which is a constellation of systems to describe a specific linguistic level in

regard to choices and structural implications. Cohesion is also one of those features of the text that have meaning-making potential through a wide array of choices they offer to the writer both syntagmatically and paradigmatically. At the syntagmatic level, an analysis of cohesion entails the configuration of the lexico-grammatical elements in the clause or clause complex structure of the text whereby semantic associations realized create texture by ensuring track of the meaning as the text transforms itself into a piece of discourse. On the other hand, the paradigmatic level pertains to the contextual factors that necessitate the choice of register thus resulting in the manifestation of a specific genre. The larger chunks of a text such as the paragraphs and beyond are structured according to the paradigmatic preferences which define the text as belonging to legal, media or academic discourse etc. My analysis of cohesion focuses on both these dimensions as I am interested in finding out the role of cohesion in creating texture as well as in achieving genre-specific academic functions in the argument structure of the sample texts.

For Halliday and Hasan (1976 p.18-19), "cohesion is both a relation in the system and a process in the text and therefore, may be understood differently". The former is about a textual situation when one item lends the source of interpretation for the other while, the latter indicates referral of one item to the other. However, it is important to understand the notions of metafunctions, text and texture, discourse structure, context and situation, and register to better understand Halliday and Hasan's (1976) concept of cohesion.

They identify three main metafunctions: the ideational based on the notion of language as real or imaginary and including people and other entities such as actions, things, states etc; the interpersonal which identifies and regulates social relationships among people; and the textual which helps in the creation of texts "which cohere within themselves and which fit the particular situation in which they are used" (Richard, et al. 1992 p.151). Cohesion, as such, relates to the textual metafunction and "is the means whereby elements that are structurally unrelated to one another are linked together through the dependence of one on the other for its interpretation" (Halliday and Hasan, 1976 p.27).

Halliday and Hasan (1976 p.293) define text as "any piece of language that is operational, functioning as a unit in some context of situation". They consider texture as a text-forming

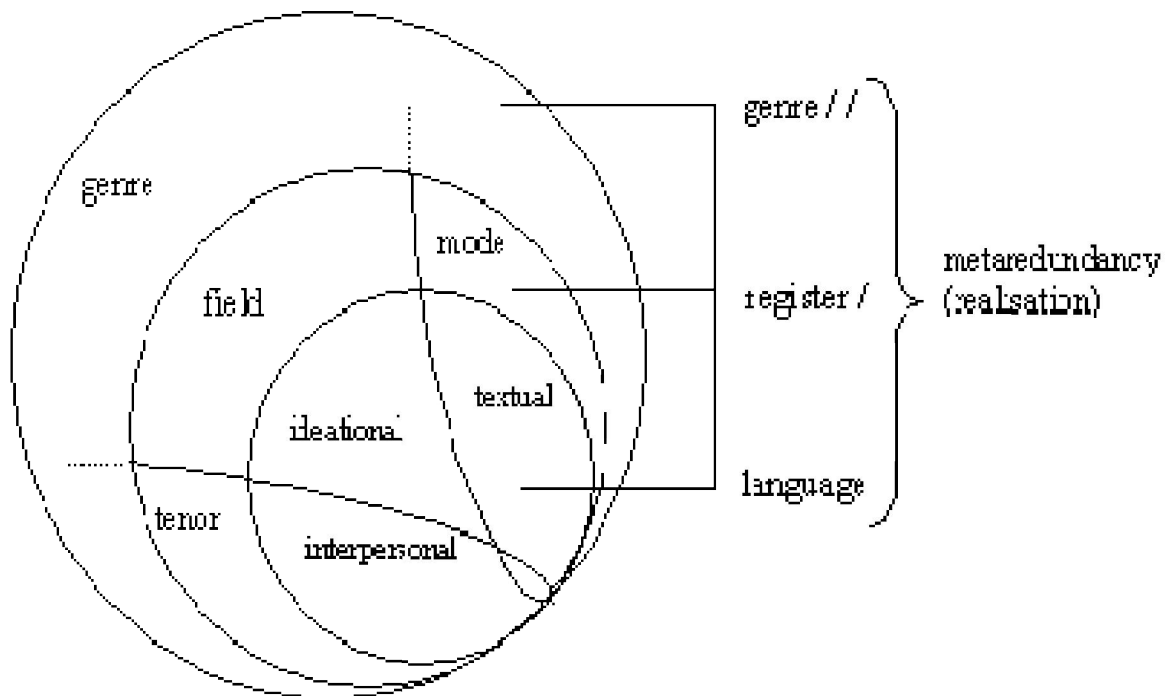
property which discriminates between texts and non-texts – an attribute which, according to Eggins (2004 p.24) “holds the clauses of a text intact to lend the text its unity”. According to Halliday and Hasan (1976 p.4), “the concept of a tie makes it possible to analyze a text in terms of its cohesive properties, and give a systematic account of its patterns of texture”. In other words, texture is "traceable through cohesion" (Fontaine, 2013 p. 169). Cohesive relations between different elements of a text, thus, create texture but "it is not enough that there should be a presupposition; the presupposition must also be satisfied" (Halliday and Hasan 1976 p.3).

Register according to Halliday and Hasan (1976 p.23) is “the set of meanings, the configuration of semantic patterns that are typically drawn upon under the specified conditions, along with the words and structures that are used in the realization of these meanings". A piece of discourse that is glued together as text by cohesive devices is also conditioned by the presence of register. In other words, cohesion and register go together in terms of consistency and thereby, lend coherence to the text from two dimensions: from context of situation resulting in consistency of register; and its own textual configuration resulting in cohesion. Texture, as such, is the product of semantic relationship between register and cohesion. The latter can be understood, according to Halliday and Hasan (1976 p.26), as "the set of meaning relations that is general to ALL CLASSES of text, that distinguishes text from non-text and interrelates the substantive meanings of the text with each other. Cohesion does not concern what a text means; it concerns how the text is constructed as a semantic edifice".

Halliday and Hasan (1976) describe cohesion as a non-structural resource for making meaning in text; later SFL theorists such as Hasan (1984), Hoey (2005), Martin (1992, 2001), and Martin and Rose (2003, 2007) adopt a discourse semantic approach to analyzing and describing cohesion. Halliday and Hasan (1976) restrict context to the notion of register which is realized by tenor, field and mode. Martin in Schiffrin (et al. Eds) (2001 p.46), however, introduces the concept of genre as another level of context distinct from that of register. Whereas register describes the context of situation, genre is about the context of culture. In other words, “register is a pattern of linguistic choices, and genre a pattern of

register choices (i.e. a pattern of a pattern of texture)” Martin in Schiffrin, et al. (Eds) (2001 p.46).

F6-LR: Metafunctions in relation to register and genre Martin in (Schiffrin, et al. (Eds) 2001 p.46)



Martin and Rose (2003 p.16-17) reformulated Halliday and Hasan’s (1976) scheme of cohesive devices in their concept of discourse which they based on appraisal, identification, conjunction, ideation, and periodicity.

- a. Appraisal is “concerned with evaluation – the kinds of attitudes that are negotiated in a text, the strength of the feelings involved and the ways in which values are sourced and readers aligned. Appraisals are interpersonal kinds of meanings that realize variations in the tenor of a text” (Martin and Rose, 2007 p.30). It is developed on the previous studies on ellipsis and substitution and targets speakers’ interaction in an adjacency-pair format.
- b. Identification is an extension of the concept of reference and studies how the interlocutors are introduced and then ‘kept track’ of throughout the text.

- c. Conjunction studies linking systems as manifested in the use of addition, comparison, temporality and causality. It also describes how verbs, prepositions and nouns operate inside a clause to create links.
- d. Ideation is development on Halliday and Hasan's (1976) concept of lexical cohesion. With Martin (1992), ideation refers to the semanticity of lexical relations instrumental in the organization of discourse through. Later, concepts such as repetition, synonymy, hyponymy and meronymy were added influenced by Hassan's (1985) work on discourse semantics. Furthermore, the concept of ideation drew on Halliday's (1994) description of the clause complex and collocation was further extended to sub-categories of elaboration, extension and enhancement.
- e. Periodicity pertains to "the rhythm of discourse – the layers of prediction that flag for readers what's to come, and the layers of consolidation that accumulate the meanings made. These are also textual kinds of meanings, concerned with organizing discourse as pulses of information" (Martin and Rose, 2007 p.31).

This redefining of cohesive relations helped in the creation of a semantic hierarchy of text-based elements that can be applied for analysis of cohesion in discourse. After these elements are further subdivided in relation with lexicogrammar, they can be linked with metafunctions in the following way: appraisal with interpersonal; identification with textual meaning; conjunction with logical meaning; ideation with experiential meaning; and periodicity with textual meaning.

3.9.1.1. The structural resources of texture and textual metafunction in SFL

Halliday and Hassan (1976 p.324) suggest that cohesion is not the only source of texture. They refer to intra-sentence structure, and macrostructure of discourse as the two other elements of texture which the present study does not plan to investigate though. The first of these is about "the organization of sentence and its parts in a way which relates it to its environment" and involves discussion of theme systems and information systems. The second component of texture - macrostructure of the text - "establishes it as a text of particular kind - conversation, narrative, lyric, commercial correspondence and so on".

3.9.1.2. Information structure: Given and New information

Information structure is mostly dealt with in the analysis of spoken language and is based on the premise that there exists some shared knowledge between the speaker and the hearer. This shared knowledge is placed in the beginning of the clause structure and is called Given information. New information is about what the speaker wants to convey. Halliday and Matthiessen (2004 p.88) suggest that an information structure is "a unit that is parallel to the clause and the other units belonging to the same rank scale as the clause". The system of information has three subsystems: information distribution which can be both marked and unmarked; information pointing which has a single or dual focus; and information focus which can also be marked and unmarked (Matthiessen et al. 2010 p.119). According to Martin and Rose (2007, p.192) "this is a different kind of textual prominence which pertains to what the speaker/writer wants to expand on. The choices for New are much more varied than those for the unmarked Theme". Bloor and Bloor (2013) argue that the Given element in the clause is a matter of choice whereas, the New is compulsory. Written English normally follows the Given + the New pattern i.e. the shared information comes first and is followed by the New information. There may be two digressions from this pattern: first, owing to the shared knowledge between the writer and the reader, a clause may not allow for the Given information; the second instance occurs when ellipsis fill in the slot for the Given information. Since Given information is socially situated, it allows for a frequent use of proper and personal pronouns save the imperative clause where the implicit second person *you* is neither said nor written. Other than the case of imperatives, the Given information is always a reference to the interlocutors or the already stated information. This formation can

lead to stretch of clauses with every clause beginning carries the message in the New of the previous clause to make new Given of the following one (Bloor and Bloor, 2013). However, the clause structure of English may become blurred in instance like shopping lists which have New information only.

3.9.1.3. Thematic structure: Theme – Rheme

Theme and Rheme are the two functional elements of the textual metafunction in a clause with Theme setting the position and contextualizing the function of the clause, and Rheme carrying the message and based on elements other than the Theme (Halliday and Matthiessen, 2004 p.64). The pattern of Theme choice, either unmarked or marked, serves to glue the text together by claiming a relatedness of topic focus. Eggins (2004 p.296) opines that “Thematic organization” contributes to the “cohesive development of the text, explaining why Halliday (1974 p.97) refers to the textual function of language as the “enabling function”. This cohesive work is mainly done by the textual Theme by linking the clause to its surroundings through a set of continuity adjuncts and conjunctive adjuncts (Eggins, 2004; Fontaine, 2013; Halliday and Matthiessen, 2004). Qi (2012 p.198) points out that marked Theme usually employs reference, substitution and ellipsis, and lexical repetition to achieve cohesive effect in text.

T3-LR-Cohesion in Theme structure

This Inventory I afterwards translated into English, and was as follows	anaphoric cohesion
Here is the news. A diplomat was kidnapped last night in London.	cataphoric cohesion
Hens lay eggs. So do turkeys.	Substitution
When did John arrive? –Yesterday.	elliptical clause
What he did was important, but important was the way he did things	lexical repetition

3.9.1.4. Theme structure beyond the clause

Although the concept of Theme-Rheme is integral to the realization of cohesive and coherent text, but it is a micro-level analysis of text organization. However, it does have implications for language structures beyond the clause i.e. discourse (Eggins, 2004). Martin and Rose (2003, 2007) introduce their notion of periodicity or information flow to describe

how larger patterns of information which they call ‘waves of information’ function in discourse. “Periodicity”, according to Martin and Rose (2007 p.188), “refers to information flow that shows how meanings are packed so that understanding them becomes easier. Typically, information flow helps the readers to develop their expectations about a text event, fulfils these expectations, and then reviews them”. They consider the topic sentence a hyperTheme and it operates on a similar pattern as a Theme to its clause. In addition, they also explore patterns of macroTheme that are also identified across larger phases of discourse.

Martin and Rose in Eggins (2004 p.326) create a ‘hierarchy of periodicity’, or layering of textual organization, to illustrate that “skillful writers and speakers use these different levels of textual structure to continually reorient the reader’s expectations for the direction of the unfolding text”. Serial expansion is another strategy. It is more of a chaining strategy in the sense that discourse is added on to what went before without being predicted by a higher level Theme. “Information in the text accumulates in each clause as the text unfolds. This accumulated information is distilled in the final sentence which functions as hyperNew to the phase. HyperThemes tell us where we are going in a phase; hyperNews tell us where we have been” (p. 195). Eggins (2004 p.197) further suggests that most of the time writing is prospective rather than retrospective in that thematic progression eventually moves away from clause boundaries to contribute to the creation of larger phases of discourse.

3.9.1.5. Cohesion, Theme and academic writing pedagogy

Researchers such as Belmonte and McCabe (1998), Ebrahimi, (2008), North, (2005) and Wang, (2007) studied the significance of Theme in students' writing. International authors writing in English often have difficulties in negotiating Theme use (Bloor and Bloor, 2012 p. 168). Many studies (e.g. Fries, 1994; Wang, 2007) have shown the merits of teaching students of writing how Theme choice and thematic progression can help to improve the flow of a text. It will be a viable idea to investigate the Theme structure of the argumentative essays written by EFL students to identify how cohesive devices operate in the choice of Theme and flow of the text. Ebrahimi and Khedri (2011) suggest that writing teachers should raise students' awareness about cohesive devices and Thematic patterns. This, they

believe, would help students to identify issues with developing logical arguments either because of issues with Thematic progression or Theme choice. Following this, a cohesive text becomes feasible in three ways:

- a. Using the topical Theme for the propositional element
- b. Using the interpersonal Theme to indicate attitude
- c. Using the textual theme to arrange the message in the clauses, produce texts, and create a textual context that facilitates comprehension of the message.

SFL, as has been discussed, can be considered to provide the most extensive explanation of cohesion in discourse. However, it can be argued that this thorough description of the linguistic phenomena has led to an equally extensive set of terminology which is often challenging to the newcomers to the SFL. One also finds the concept of cohesion in SFL continually evolving since Halliday and Hasan's (1976) publication of *Cohesion in English*. The evolution though full of insights on the topic has become too broad for a single study to investigate. I, therefore, intend to restrict my analysis to Halliday and Hasan's framework (refer to 3.11); however, my method of analysis may seek scholarly evidence from other theorists in the SFL and other linguistic traditions.

3.9.2. Cohesion in a Contrastive Rhetorical Perspective

The concept of cohesion in contrastive rhetoric is linked with the concept of text linguistics which normally refers to linguistic analysis of cohesion, coherence, schematic structure or superstructure (Enkvist, 1987). A text is a syntactically well-formed group of structures which adopt logical progression in their arrangement so as to conform to the expectations of specific audience in specific situation and context (ibid). Cohesion, in this regard, can be specifically understood as a configuration of lexico-grammatical devices to suggest the relationship between sentences and groups of sentences. From CRT perspective, Connor (1996) maintains that a meaningful text reflects an overall coherent structure which is, in fact, realized through logical links or cohesive devices. In short, cohesive devices in CRT scheme of work supply a framework for coherence while, coherence allows the reader to build a model of comprehension (Limon, 2008).

CRT perspective for analysis of cohesion in writing has been applied by many researchers including those in the Arab context. For instance, Mohamed and Omar (2000) refer to cohesion in Arabic as repetition-oriented, context based, generalized, and additive. This contrasts with English cohesion which is assumed to be change-oriented, text-based, specific, and non-additive. However, these claims come with little empirical evidence to support differences in cohesive features. Similarly, Almeahmadi's (2012) findings that Arab culture allows for a high frequency of lexical repetition does not read impressive especially from Hoey's (1991) point of view that lexical cohesion is the main storehouse of cohesion devices in a text. Chinese and students from other cultures have also been reported making extensive use of the lexical repetition (e.g. Hinkel, 2001; Liu and Braine, 2005).

Traditionally, L2 writing pedagogy in Saudi Arabia has focused on discrete item type of instruction using decontextualized lexicogrammatical resources in order to prepare students for the type of accuracy needed for the examination purposes (Khan, 2011). This shifts the focus from sentence level writing instruction to raising awareness of the L2 student writers to think "holistically in terms of creating coherent texts" (Snell-Hornby, 1988 p.18), to understand the rhetorical conventions of the target language, and to use morpho-syntax and cohesive devices for creating a coherent piece of discourse (Casanave, 2004; Kaplan, 1988). Shukri (2014 p.191) observes that "contextual issues of religious conformity, cultural resistance to self-expression, and pedagogical background affect the way Arabs perceive learning, in general, and learning to write in a second language, specifically". Conner (2004 p.17), however, posits a more radical view by suggesting that "cultural differences need to be explicitly taught in order to acculturate EFL writers to the target discourse community". My research will include students and teachers' perceptions about the impact of Arab language and culture on their English writing and collate these beliefs with the textual evidence as received through the analysis of students' writing.

3.9.3. Cognitive linguistics perspectives on cohesion

Cohesion in cognitive linguistics is situated in the belief that cognition shapes and helps to regulate mental representations of our world-view. Human cognition is capacitated, along with sentence syntax and semantic association, to accommodate discourse associations

which are used by the interlocutors in the development and organization of discourse (Taylor, 2002). Cohesive features, discourse markers, and transitions of text internal unity can also be said to carry this function (ibid).

Schema theorists such as Carrell (1982) and Rumelhart (1977, 1980) adopt a top-down approach to reading for analysis of both cohesion and coherence and conclude that cohesion is, primarily, a coherence-led phenomenon. This view which contradicts Halliday and Hasan's (1976) stance on cohesion as a determiner of coherence is based on the assumption that there is "an interactive process between the text and the background knowledge or memory schemata of the listener or reader" (Carrell, 1982, p.482). In this model of text-processing, the actions of the listener or the reader with the text take preference over the content and structure of the text.

McNamara, et al. (2010) interpret cohesion and coherence as explicit and implicit properties of the text respectively meaning thereby that cohesion is a textual phenomenon while, coherence is a cognitive representation of the text by the reader/listener. Cohesive devices as words or phrases guide the reader to establish a logical link between different parts of the text as well facilitate him to develop a coherent picture of the whole text. A reader conceives of a text as a coherent entity if the ideas presented in the text are meaningfully and logically glued together. This entails that coherence is a product of the mental processes used by the reader/listener in the text processing phase.

Various studies have been conducted to study cohesion and coherence from cognitive linguistics' point of view. For instance, McNamara, et al. (2010) used science texts to measure the impact of cohesion on the reading comprehension of students. They found some important correlates between cohesion and world knowledge of the students. Readers with low level knowledge were given cohesively dense texts; whereas, proficient readers were given texts with cohesion gaps so that they could make inferences. The study suggested that texts with high frequency of cohesive devices will benefit less proficient readers more than the high proficient (O'Reilly and McNamara, 2007a). I also plan to correlate cohesion with student scores; however, my focus would be to see the differences of grades between the proficient and the less proficient students on a cohesion measurement scale. Besides, I also

propose to correlate cohesion scores with text length and cohesive density to see the significant associations between the variables.

3.9.4. ELT perspectives on cohesion

The concept of cohesion in English Language Teaching (ELT) is based on the assumptions that “language is realized, first and foremost, in a text”; language users have “to make sense” of texts and produce them; and the task of the language teacher is to help his students “engage with texts” (Thornbury, 2005 p.6). McCarthy (1991 p.147) corroborates these assumptions by suggesting that the language teachers should know “how different texts are organized and how to realize the process of creating written texts” in order to develop authentic instructional material for the classroom. Cohesion being one of the defining properties of text has, therefore, prime importance both in the process of discourse development and creation of text as a final product. This entails that the notion of cohesion is associated with the linguistic competence of the student writers especially in academic context when the assessment of the final product is the “only measurements to verify students’ academic achievement” (Hinkel, 2001 p.123). This inspired me to include a correlation analysis of the students' exam scores on cohesion and their writing to see how cohesion in its frequency and density affects students' writing.

Zamel (1983 p.165) believes in the effectiveness of teaching cohesive devices for they have the potential to "turn separate clauses, sentences, and paragraphs into connected prose, signaling the relationships between ideas, and making obvious the thread of meaning the writer is trying to communicate". Yao (2013) argues that good understanding of cohesive devices can help learners to improve their reading comprehension since it is crucial for them to identify, for instance, the referents without looking back to the passage especially in the case of pronouns and demonstratives. This also develops their sense of the text pattern and subsequent analysis which, according to Hoey (2001), facilitate reading and writing skills for those students trained in rhetorical traditions other than English. According to Dooley and Levinsohn (2001 p.16):

Cohesion is likewise important to the text analyst. When you analyze discourse, especially without a native speaker’s intuitions of language and culture, on what do you base your

judgment of the text's coherence? On what basis can you construct a mental representation for it, whether internal or external? While cohesion does not provide the only answer (native speakers and the study of culture should help), it can certainly provide important evidence.

However, there have been serious concerns if cohesion is effectively teachable (Lee, 2000) or challenging (Bachman, 1990 in Ventola and Mauranen, 1996). Since cohesion is about establishing semantic associations through the use of grammar and lexical devices, it becomes challenging for the teachers to help the students internalize the notion of cohesion as being something non-structural and semantic but emerging out of the structural i.e. lexico-grammar. Nevertheless, explicit teaching of cohesive devices (McCarthy, 1991) can, thus, enable students to familiarize themselves with a range of textual patterns in the target language ultimately creating a meaningfully unified text. Hinkel (2001) observes that the focus of cohesive devices in L2 writing is on use and meaning while, in reading issues related to logical progression of ideas and text organization are targeted. In Halliday and Hasan's (1976) view, text cohesion in turn leads to greater text coherence. Tadros (1994) in Hinkel (2001) has reported the use of enumerative nouns such as those of categorization and division (*class, type, category, issue, matter, problem*), for instance, as one of higher frequency in academic writing. Several textbooks on academic writing, as are for instance, used in Saudi Arabia (Oshima and Hogue, 2006), contain explicit material on cohesive devices mostly dealing with coordinators, subordinators, and transition signals with the aim to enable L2 student writers produce cohesive texts comprehensible to the native speaker readers (Reid, 1993). But the taxonomy for cohesive devices is limited due to its instructional focus on linking clauses through coordination and subordination. Similarly, cohesion as is evident in the structural resources of Theme-Rheme patterns at the inter-clause level does not find explicit pedagogic preference in Saudi Arabian EFL context. In addition, teaching of cohesion does not target larger phases of discourse as enunciated by Martin and Rose (2007). So is the teaching of referential cohesion, substitution and ellipsis. Limited lexical range is one of the major weaknesses of Saudi student writers and the textbook or course materials such as Oshima and Hogue's (2006) do not have explicit provision for lexical cohesion in the course design. Hence, there is a serious need to explore the domain of cohesion from the perspectives of academic functions to inform academic writing pedagogy in Saudi EFL contexts. I also aim to study the use of cohesion in the

rheterical structure to see how cohesion manifests itself as a semantic property in the realization of different academic functions in students' argumentative writing.

3.9.5. Computational linguistics perspective

Computational linguistics deals with the automatic processing and analysis of natural language texts or speech (Palmer, et al. 2012 p.3). Use of computational methods in linguistics cover a wide array of research activity such as "the formulation of grammatical and semantic frameworks for characterizing languages in ways enabling computationally tractable implementations of syntactic and semantic analysis" (Stanford Encyclopedia of Philosophy, 2014).

Computational linguistics approaches to cohesion involve analysis of both spoken and written discourse through the use of computer programmes such as Coh-Metrix. Coh-Metrix was built on previous programmes used in computational linguistics on WordNet (Miller et al, 1990), the MRC Psycholinguistics Database (Coltheart, 1981), and the CELEX Database (Baayen et al, 1995). These previous developments in linguistic programming allowed Coh-Metrix to process a piece of text for analysis of several cohesion features which include analysis of semantic associations. Together, these resources allow the Coh-Metrix to process natural language and describe features such as semantic associations, word class frequency, type-token ratio, etc. The tool was initially used by Crossley, et al. (2008) to analyze readability scores that can be used for designing instructional materials for TESOL. They then used the corpus of this study to correlate cohesion with readability scores. The results revealed a very strong correlation of cohesion with learners' beliefs about readability even more than had been shown by other formulas. Green (2012) argues that Coh-Metrix can be employed to select level specific reading material for second language learners.

Palmer et al. (2012) used Coh-Metrix to ascertain the extent of literal and non-literal expressions in relation to cohesion and textual environment. The results indicated that non-literal forms were less frequent than the literal. In addition, they also argue that "an automatically computable semantic relatedness measure based on search engine page counts correlates well with human intuitions about the cohesive structure of a text and can therefore

be used to determine the cohesive structure of a text automatically with a reasonable degree of accuracy" (p.3).

In another study, Green (2012) used six Coh-Metrix variables to measure competency difference in the second language. Five variables of the software could not identify the differences. However, the tool was far more accurate in its detection of the differences between first and second language proficiency features. Green (2012 p.57) discovered that these "differences included that L2 writing contains more argument overlap, more semantic overlap, more frequent content words, fewer abstract verb hyponyms and less causal content than native speaker writing".

3.9.6. Anaphora resolution studies

Anaphora resolution (AR) studies are an important contribution to the study of cohesion in discourse from NLP and Computational Linguistics perspectives. AR refers to the process of tracking back an already mentioned item in the text. Different linguistic operations are performed through the use of several algorithms to resolve problems in regard to tracing the referent for an anaphora. These items are usually noun phrases representing objects in the real world called referents but can also be verb phrases, whole sentences or paragraphs. If the antecedent and the anaphor have the same referent in the real world they are *coreferential* (Mitkov, 2002). The process of building chains of coreferential entities is called *coreference resolution*. An anaphora could be a pronominal, definite noun phrase or quantifier. Typically, AR is attempted either through eliminative constraints such as those relating to gender, number and semantic consistency or via weighting preferences based on notions of proximity, centering, and syntactic/semantic parallelism.

There are important applications of AR in information extraction such as "comprehending" a discourse in order to summarize it or answer questions from it. Mitkov (1995a) reports antecedents which have been tracked 17 sentences away from the anaphor. This points to the role of AR in discourse comprehension. Grosz et al. (1995) argue that the real challenge to AR comes from pronouns occurring intersententially. They point out that Discourse Representation Theory and the Centering Theory can be used for AR especially the

Centering Theory have been found more computationally effective than most linguistic theories.

Anaphora problems vary from language to language and language (Nicolov, 2003). For instance, English, French, Japanese, Spanish have relatively simple anaphoric systems. However, Icelandic and Marathi have been found to contain complex anaphor systems, and pose a serious challenge to researchers working in the NLP traditions.

Several computer programmes have been developed for AR. Mitkov's Anaphor Resolution System (MARS) with several versions being one of the most commonly used. More recently, the Automatic Content Extraction (ACE) evaluation also provides for AR. Multilinguality is also a factor of concern and researchers are interested in domain- and language-independent techniques.

The use of computational techniques with computer based natural language processing programmes in cohesion analysis have generated useful empirical data on the subject. However, the use of computer programming in language analysis is not without its challenges. For one thing, using computational techniques requires expertise in computer technology, NLP and linguistics can be difficult for those dealing with applied linguistics only. Secondly, the results obtained from software vary and may need human intervention for qualitative analysis. For instance, Coh-Metrix provides statistical output of the different cohesion variables. The researcher needs to go back to the original text in order to provide explanations for different aspects of the outcomes shown by the software. Similarly, AR studies can be challenging for those researchers who are not trained in statistics to use and interpret different algorithms used for the resolution. Not only this, different types of algorithms are likely to produce different results which may raise issue of appropriacy and understanding.

3.10. Types of Cohesive Devices

Halliday and Hasan's (1976) classification of cohesion, which the researcher plans to use for the present study, is primarily based on two major categories: grammatical cohesion which includes reference, substitution, ellipsis, and conjunction; and lexical cohesion which is based on the analysis of reiteration (repetition, synonyms and general words) and collocations.

3.10.1. Grammatical cohesion

Cohesion being manifestation of the textual metafunction realizes itself in the nonstructural grammatical resources of reference, substitution, ellipsis, and conjunction with layers of subcategories under each type. According to Halliday and Hasan (1976, p.32), “reference is an item that rather being semantically interpreted makes reference to something else for interpretation”. From Eggins’ (2004, p.33) point of view, reference “refers to how the writer/speaker introduces participants and then keeps track of them once they are in the text” – a view initially proposed by Martin (2001) under the category of identification. Halliday and Hasan (1976) state that reference is either situational or textual. The former is exophoric while the latter is endophoric comprising of anaphoric (pointing backwards) and cataphoric (pointing forward) properties. An essential property of reference in the creation of cohesion is when ‘the identity of a referent item is retrieved from within the text’ (Eggins, 2004 p.34) – in fact, a property of endophoric reference. This entails that cohesion is a feature of endophoric reference only. From the research context perspective, Saudi students may have problems with referential cohesion (Wahby, 2014) since their L1 “verb forms incorporate the personal pronouns, subject and object, as prefixes and suffixes. It is common to have them repeated in English as part of the verb as, for example, in *John he works there*” (Swan and Smith, 2001 p.202). Similarly, the Arabic notion of gender (e.g. Sadiqi, 2003) may also cause certain problems in using referential cohesion. Arabic has two genders – the masculine and the feminine – and it uses feminine gender to refer to plural neutrals. So, the Saudi students’ use of the neuter may be ambiguous at times.

Substitution occurs when a speaker or a writer uses grammatical potential of the language to replace a lexical item for reason of avoiding repetition (Bloor and Bloor, 2013). There are three types of substitution: nominal, verbal, and clausal. Ellipsis, on the other hand, is “substitution by zero, is omission of words, groups, or clauses, and occurs in the same grammatical settings as substitution, and likewise can be *nominal*, *verbal*, and *clausal*” Halliday and Hasan (1976, p.99). However, substitution and ellipsis are a property mainly of the spoken discourse and are less frequent in written discourse, especially academic (Halliday and Hasan, 1976).

Conjunction may be understood as a word or phrase that establishes semantic relationship between propositions. Halliday and Hassan (1976) categorized conjunction as *additive*, *adversative*, *causal*, and *temporal* but, later Halliday (1994) and Halliday and Matthiessen (2004) changed their taxonomy to bring these types under the broader category of “logico-semantic system of the English clause” (Eggins: 2004 p. 47): elaboration, extension and enhancement. This study, however, plans to adopt Halliday and Hasan's (1976) category of conjunctions (3.11). Additive conjunction adds to the information stated in the previous clause. Typical additive conjunctives are "*and, and also, or, for example, for instance, furthermore, moreover*" etc. Adversative conjunctions are those which state a contrastive relationship with the previous information. "*But, however, nevertheless* etc." are some of the commonly used adversatives in students' writing. Causal conjunctions add to the previous information but this extension is the "consequence of the preceding clause" (Christiansen, 2011 p. 182). The causal conjunctions such as *so, thus, therefore* etc. signal cause and effect relationship. Temporal conjunctions typically mark sequential relationships between clauses. *First, secondly, next, then, finally, in conclusion* etc. are some of the most commonly recurring temporal devices in academic writing.

3.10.2. Lexical Cohesion

Bloor and Bloor (2013 p. 101) state that “lexical cohesion refers to the cohesive effect of the use of lexical items in discourse where the choice of an item relates to the choices that have gone before”. In other words, lexical cohesion is about the use of content words and sequencing of events to create consistent links between the text and context (Eggins, 2004). Halliday and Hasan's (1976) original classification of lexical cohesion, which this study proposes to adopt for text analysis, was based on reiteration and collocation. Reiteration comprises of repetition of the same lexical item, synonyms, superordinates, and general words. Al-Jabouri (1984) provides a comprehensive description of repetition as a cohesive device in Arabic. He segregates repetition into three main categories: morphological, word-level, and chunk-level. The chunk-level repetition is further divided into two subcategories: parallelism and paraphrase. Collocations are expectancy relations (Eggins, 2004) between lexical items that frequently co-occur.

A very significant contribution to lexical cohesion comes from Hoey (1991), who argues that “the study of the greater part of cohesion is the study of lexis, and the study of cohesion in text is, to a considerable degree, the study of patterns of lexis in text” (1991, p. 10). Hoey postulates that both text cohesion and coherence are established through the lexical patterning of individual words with each other. To this end, he introduces the concept of a bond which is the above-average occurrence of lexical ties between two sentences realized through reiteration such as repetition, paraphrase, and referring expressions. The researcher, however, aims to use Halliday and Hasan's (1976) taxonomy of cohesive devices for the present study. The section below evaluates main frameworks of cohesion analysis as well as states the rationale for choosing Halliday and Hasan's (1976) taxonomy.

3.11. Evaluation of cohesion models and preference for Halliday and Hasan's (1976) framework for cohesion analysis

I had a number of cohesion models to choose from for analysis of the text samples for the present study. A number of factors, however, dictated the choice. Since cohesion classification models adopt different criteria, they are not directly comparable (Xi, 2010). For instance, "repetition" in Halliday and Hasan (1976) is "recurrence" in de Beaugrande and Dressler (1981). Eggins (1994, 2004) identifies lexical cohesion as based on taxonomic and expectancy relations while, Hoey (1991) creates a net of bonds to include simple lexical repetition, complex lexical repetition, simple mutual paraphrase, simple partial paraphrase, complex paraphrase, substitution, co-reference and ellipsis. I argue that this diversity in classification is not a handicap, and these models have the potential to analyze cohesion in detail; however, it is the research foci that allows for preference of one model over the others. I preferred to adopt Halliday and Hasan's (1976) framework for a number of reasons:

First, Halliday and Hasan's (1976) model is the most frequently and widely used framework of cohesion analysis in academic settings which provides access to a huge bank of empirical evidence that can be used to compare findings with the previous work for both corroboration and contradiction. Secondly, most models of cohesion analysis post Halliday and Hasan's (1976) work are, in fact, a derivative of their framework. For instance, Hasan (1984, 1985) extended this original model to expand on structural and non-structural cohesion. Structural cohesion is based

on parallelism, Theme-Rheme structure, and Given-New organization. On the other hand, non-structural cohesion with reference, substitution, ellipsis, and lexical cohesion devices (general and instantial) make for componential relations whereas, grammatical elements such as conjunctions, adjacency pairs, and lexical devices such as continuatives establish organic relations. Hasan's (1985) work led Hoey (1991) to introduce his theory of lexical cohesion, and Martin (1992) to develop his own system of cohesion focused on discourse semantics. Later work on cohesion in SFL and other traditions is also an extension of Halliday and Hasan's (1976) analysis of cohesion. Thirdly, I believe that Halliday and Hasan's (1976) model is more comprehensive and consistent in its description and analysis of cohesion than others. Hoey (1991), for example, does not segregate grammatical cohesion which can be analyzed to get insights into the grammatical competence of the students in developing meaning relations at the intra and intersentential levels. Instead, he uses colligation for analysis of the grammatical collocation which in Halliday and Hasan (1976) are part of the collocations including the lexical. Similarly, Hoey's taxonomy of lexical cohesion focuses on reiteration but excludes the study of collocations, and as such a complete account of lexical choices cannot be furnished. This is supported by a study by Tangkiengsirisin (2010) which adopted Hoey's framework for lexical cohesion but could not include collocations owing to limitations of the framework. On the other hand, collocation in Martin's (1992) system of cohesion is "factored out into various kinds of 'nuclear' relation, involving elaboration, extension, and enhancement" (Martin in Shiffrin et. al (eds), 2001 p.38). In short, Hasan's (1985) theory of cohesive harmony, Hoey's (1991) theory of lexical cohesion, and Martin's (1992) system of cohesion are focused more towards discourse semantic analysis of cohesion to establish a comprehensive account of the relationship between cohesion and coherence in the creation of texture. Since analysis of text coherence is not the focus of the present study, I preferred to adopt Halliday and Hasan's (1976) original description of cohesion which targets the analysis of lexico-grammatical choices in the creation of semantic relations among different parts of the text, thereby resulting in texture. Although Halliday (1994) revised their original description of conjunction to include elaboration, extension, and enhancement, I used the former. Halliday (1994) introduced the later for description of the clause complex which entails analysis of Mood, Transitivity and the metafunctions (ideational, experiential, textual) also. The present study is, in fact, narrowed down to analyze cohesive devices as non-structural resources of texture in discourse. I, therefore, felt that investigation of

conjunction devices as included in the (1976) framework will be more appropriate for the focus of this study than the analysis of elaboration, extension and enhancement. Significantly enough, the present study proposes to provide insights to those engaged in pedagogy, learning, curriculum design, and research. Halliday and Hasan's (1976) model is simplistic in its classification of cohesive devices which feature commonly in most grammar and writing books. The students and the teachers are familiar with most devices such as the pronouns, article, conjunctions, repetition, synonyms, general nouns, and collocations. The researcher believes that an analysis of these lexico-grammatical items will provide a more systematic account of their use as cohesive devices and also facilitate the stakeholders' understanding of their use in academic texts and can, therefore, easily identify and correlate the findings of the present study with their real life pedagogic and learning experience.

3.12. Cohesion as a variable of writing quality

When Halliday (1974 p.97) calls textual function as the 'enabling function', he is, in fact, referring to the potential of English clause structure that through its patterns of structure and meaning relationships leads to the construction of cohesive and coherent text. The aim of different theoretical perspectives on academic writing and cohesion seem to be "the strengthening of text processing and production competence by the increase in linguistic discursive awareness of basic generic principles and lexico-grammatical resources" (Bhatia et al., 2004 p.205). Cohesive devices have been used to gauge writer's linguistic and communicative competence (Hymes, 1974) as Halliday and Hasan (1976 p.4) put it "the concept of a tie makes it possible to analyze a text in terms of its cohesive properties, and give a systematic account of its patterns of texture". Cohesive devices are also used to assess students' ability to produce academic texts using a range of strategies whereby they employ grammatical or lexical cohesive devices in order to "enable readers or listeners to make the relevant connections between what was said, is being said, and will be said" (Castro, 2004 p.215). Cohesion is also significant in establishing the flow of discourse to make it read like natural and native-like which otherwise will lack fluency and connectedness (Eggington & Ricento, 1983). Cohesion aids both the reader and the writer in facilitating comprehension for the former and directing comprehensible organization of text for the later (Cox, et al. 1990 in Palmer, 1999). Crossley & McNamara (2009

p.120) also corroborate this view that textual cohesion is “a critical aspect of successful language processing and comprehension and is premised on building connections between ideas in text”.

Studies on cohesion devices in the context of academic writing have, however, yielded opposing results. For instance, researchers like Johnson (1992), Todd, et al. (2007) and Zhang (2000) have concluded that writing quality is not impacted by cohesion while there are other studies (Chiang, 1999; Liu & Braine, 2005; Song & Xia, 2002) which provide evidence of strong correlation between cohesion and writing quality.

Although the traditional writing instruction in EFL/ESL contexts has focused on micro-level linguistic features (Lee, 1998), teachers normally correlate the presence of cohesive devices in a text with the writing quality (Wahby, 2014). Crowhurst (1987) and McCulley (1985) observed that persuasive writing was affected by the use of certain language features including cohesive devices. In another study by Cameron et al. (1995) cohesion is reported to be responsible for 15% of the significant differences in the quality of writing among children suggesting that cohesion accounts for good writing. Chiang's (1999, 2003) analysis of cohesion found that native speakers base their notion of quality of writing in EFL on the use of discourse features like cohesion and coherence. Guiju (2005) analyzed writing samples of 85 students to test the correlation between knowledge of cohesion and the quality of writing of college students. His results indicated that high score essays had effective use of cohesive devices as compared to the low grade which did not show statistically significant use of cohesive devices. Cooper (1986) studied 400 persuasive texts and found no correlation between cohesion and writing quality. Similarly, a study of 38 college essays by Jafarpur (1991) found no significant correlations between holistic scores and cohesion devices in terms of frequency and category. However, these and many other studies (Ferris, 1994; Neuner, 1987; Witte and Faigley, 1981 etc.) observed a higher presence and variation of lexical cohesion in students' texts. Witte and Faigley (1981) observe that it is the writer's invention skills and not the quantitative presence of cohesive links that account for the writing quality. The present study will use the students' exam scores for each sample text and create a relative score for cohesion use. These scores will then be used to see if there is any significant relationship between cohesion and writing quality in terms of text length and cohesive density.

3.13. Studies on cohesion in Arab EFL/academic writing

Research on cohesion has featured regularly in the Arab EFL context. One of the earliest studies on cohesion in the Arab academic world was that of Bacha and Hanania's (1980) who reported their students' inability to develop logical links among different ideas in discourse through the use of conjunctive adjuncts. However, this study was limited for it could not account for cohesive devices other than conjunctive adverbs. Similarly, the study did not investigate lexical cohesion -- one of the research aims of the present study -- which is significant in creating texture as well as achieving rhetorical functions in a text. Ostler (1987) found Arab students overuse coordinating conjunctions (*and, but, or*) to develop a feel of parallelism and rhythmic balance -- features typical of their L1 Arabic. In another study, Al-Shatarat (1990) applied objective tests on 100 Jordanian student writers. The results indicated that the students were unable to make effective use of both grammatical and lexical cohesion markers. El-Shiyab (1997) studied various academic genres to identify relationship of lexical cohesion and interplay of identity chains. He found semantic connections between and among referential cohesive markers. Khuwaileh and Shoumali (2000) observed correlation between quality of writing in Arabic and English and found that competence in L1 affects the quality of production in L2. In a comprehensive cross-cultural study involving 898 academic scripts of 145 NS American, and NNS Japanese, Korean, Indonesia, and Arabic students, Hinkel (2001) made comparisons in the use of cohesive devices. She found that the Arab students used more coordinators than the NS Americans.

In Saudi Arabia, Al-Jarf's (2001) research revealed that students had serious problems in the use of substitution as a cohesive devices followed by reference and ellipsis. The researcher attributed the cause of non-proficient use of cohesive devices to students' failure to demonstrate competence in lexico-grammar, semantic relationships, and cohesion rules. Several other studies carried by Abisamra (2003), Al-Jubouri (1984), Aziz (2012), Bacha (2002), El-khatib (1984), and El-Shiyab, (1997) confirm that parallelism, co-ordination, and repetition are typical features of Arab rhetoric. Arab learners, who are not exposed to patterns of English rhetoric, ultimately end up incorporating these L1 features into their writing. Hence, they have problem in using cohesive devices effectively, especially reference and conjunction.

Fakhri (2009) had a comparative study of conjunctive adjuncts in the writings of the NNS Syrian and the British NS of English. The British students displayed variety in the use of conjunctive adjuncts while the Syrian students used almost double the number of conjuncts, especially additive and causal, than their counterparts. Mohamed-Sayidina (2010) also investigated fifty academic research papers written by Arab ESL student writers anticipating the use of additive conjunction in creating propositional connectivity, which was found to be true.

Abdalwahid (2012) used Halliday and Hasan's (1976) taxonomy of cohesive devices with a focus on reference, conjunction, and lexical ties to research argumentative essays of 10 Libyan university students. Additive conjunctions posed the greatest difficulty with adversative, causal and temporal conjunction being second, third and fourth respectively. The results also pointed to the overuse of the additive *and*. Rahman (2013) conducted a comparative study involving NS student writers and NNS Omani students. He found significant variations in the use of cohesive devices specifically from the measure of frequency, variety, and control by the two groups of writers. The EFL Omani student writers failed to use a range of cohesive devices and were restricted to the overuse of repetition and reference. The NS writers, on the other hand, had shown variety and control in the use of a range of cohesive devices which made their text read more fluid than their counterpart Omani students.

A recent study by Hamed (2014) of Libyan undergraduate students focused on the analysis of conjunctions in argumentative essays. The results demonstrated that the students' use of conjunctions was inappropriate and they encountered serious challenges in the use of adversative, additive and causative conjunctions respectively. Darweesh and Kadhim (2016) investigated Iraqi students' use of conjunctive cohesion and found that the misuse far outnumbered the appropriate use which clearly indicated that the students were unable to create organic text connectivity" (Ting, 2003). Saud (2015) studied cohesive devices in the descriptive writing of Saudi EFL undergraduate students and discovered that the use of lexical repetition gradually decreased with increase in the grade level. A very recent study by Alzankawi (2017) shows that Kuwaiti EFL students demonstrated discernible differences in the use of cohesive devices especially preferring high frequency use of referential, conjunctive, and lexical cohesion to substitution and ellipsis. Another latest research by Al-Khatib (2017) reveals that students' writing show inappropriate use of cataphoric and anaphoric reference, ellipsis, substitution, and

other grammatical cohesive ties. He observes that "the challenge that students face while writing is increased by the fact that the rhetorical conventions of the English texts such as the structure, organization and grammar differ from those in Arabic". (p. 81)

It seems that research on cohesion in academic writing in Arab EFL context is not conclusive and has still many bumps left for ironing. Most studies as stated earlier limit themselves to surface level description of the cohesive devices involving frequency counts and types.

Explanation of how cohesion performs its text-forming role by creating texture is generally not visible in these studies, especially in academic writing. The intrasentence cohesion appears to be an untouched area which can be explored using Theme-Rheme structure. The use of cohesive devices in achieving different rhetorical and academic functions through the use of appropriate register and genre seems to allow for further enquiry. Apart from the lexico-grammatical features, text external matters such as the social, cultural, cognitive, and pedagogic also need to be studied to inform contemporary research on how these factors contribute to the development of academic literacy among student writers. The present study will pick up some of these research gaps for further investigation and expects to inform teaching and learning of academic writing, course and syllabus design, and materials development for ESL/EFL contexts in general and Saudi EFL context in particular.

3.14. Chapter summary

This chapter presents theoretical background to the current study in two main sections. The first part details various perspectives that inform academic writing in regard to theory and practice both in the global and the Arab EFL context. The second part of the chapter provides a comprehensive overview of cohesion as a text-forming resource. Relevant referrals to studies especially in the Arab world have also been made. Both sections of the chapter aim to identify research gaps that are discernible in the review of literature on cohesion and academic writing so that research aims and questions for the present study are generated. Chapter 4 will present these research aims and questions along with the proposed research methods and analytical procedures that the researcher plans to use to find out answers to the research questions.

Chapter 4: Research Methodology

4.0. Introduction

The present study is a mix of both explanatory and interpretive research that primarily adopted discourse/text analysis models to investigate the use of cohesive devices in the argumentative essays written by Saudi EFL undergraduate students. The study used both quantitative and qualitative research methods. These two approaches are currently viewed as complementary rather than fundamentally incompatible, and more mixed-paradigm research is recommended (Bergman, 2008; Dornyei, 2007; Tashakkori and Teddlie, 2003; Teddlie and Tashakkori, 2010). I, therefore, chose mixed-methods approach which while empirically grounded in theories is believed to be a flexible approach as it resorts to both qualitative and quantitative paradigms and welcomes critical opinions on educational processes and practices (Brown, 2004; Miles et al. 2014). I also proposed to triangulate the study, and believed that this approach would unveil valid and reliable (Berg, 2014) patterns of the use of cohesive devices in the academic writing of Saudi EFL students.

This chapter focuses on research methodology that I planned to use, and includes theoretical discussion on qualitative, quantitative, and mixed-method research paradigms. I also attempt to rationalize my choice of the methods which, I believe, were more appropriately suited to do the textual analysis of the sample essays, and gauge perceptions of the teachers and the students from the questionnaires and the interviews. The chapter also includes mention of the research aims, research questions and presents details about the research design. Matters pertaining to sampling, data collection and analysis, and research ethics have been presented in detail. The research design involves a survey of the studies on academic writing and cohesion with a recourse to perspectives primarily from Systemic Functional Linguistics (SFL) for research question 1, ESP/EAP, Academic Literacies and Genre theory for research question 2, and English Language Teaching (ELT) for research question 3. The chapter concludes with preparation for the pilot study which was also an essential part of the research design.

4.1. Theoretical framework for research design

This section of the chapter presents an overview of the theories that motivated the use of research methods for the present study. As stated earlier, I attempted to use mixed-methods by blending, wherever appropriate, qualitative and quantitative paradigms to find out answer to the research

questions generated for the study. This section of the chapter starts with the rationale for choosing this approach for the present study in order to explain in the following sections how this approach served the purpose of the present research. Following rationale for the choice of research approach, the section presents discussion on quantitative approach, qualitative approach, comparative analysis of both research paradigms, and the mixed-method approach.

4.1.1. Rationale for the use of mixed-methods and triangulation

"The collection and analysis of language data", which was also the focus of present study, "is a highly specialized applied linguistic task, and several sub-disciplines-for example, language testing/assessment, discourse analysis, conversation analysis, and corpus linguistics have been developed to help to conduct the processing of such data" (Dorneyi, 2007 p.19). Such data collection and data analysis complexity can be effectively handled through the use of mixed-methods approach.

As stated earlier, multi-methods approach can be used to enhance the strengths and control the weaknesses of the research methods employed in a single study. This approach in all its forms eliminates researcher bias and limitations associated with certain data collection techniques (Maxwell, 2005). Dorneyi (2007) illustrates this point by suggesting that context-specificity and unrepresentative sampling in qualitative research can be made bias free if the selection of the qualitative participants is based on the results of an initial representative survey. Similarly, in language analysis, for instance, a researcher may want to investigate a typical language feature such as the use of cohesive devices in argumentative essays for its inherent characteristics as well as incidence and frequency. He can use a large sample of language data and then describe or interpret complex matters by simply using numbers to express meaning, and words to express numbers. Since mixed-methods have the potential of adding "rigour, breadth, and depth" to the investigation (Denzin and Lincoln, 1998 p.4), one can expect research findings more reliable and valid as could have been in either a quantitative or qualitative research.

Not only this, data collection and analysis from multiple resources - triangulation - can also increase the generalizability or external validity of the study. This entails that results obtained from multiple data collection and data analysis tools are likely to be welcomed by

audience with divergent research perspectives. The most visible challenge to this extended audience appeal could be researcher's inability to handle different research methods in one study though.

4.1.2. Quantitative research methods

Quantitative research generally referred to as logical-positivist had been a dominant research paradigm till the latter half of the 20th century. It "generates statistics through the use of large-scale survey research, using methods such as questionnaires or structured interviews" (Dawson, 2007 p.16). Basically, quantitative research is employed to study contemporary conditions with special focus on relationships between quantifiable variables (Hammersley and Atkinson, 1995). Typically, results are described numerically and the study aim could be causal-comparative or experimental, and co-relational "depending on whether the relationship is studied after the fact or in a controlled environment" (Gay, 1997 p.14).

Dornyei (2007) characterizes quantitative research for its use of not only numbers but also prior categorization and values. He maintains that quantitative researchers are more interested in measuring commonalities among group or groups of people. Since measurement of variables involves "counting, scaling and assigning values to categorical data" (ibid), use of statistics and its terminology in description of results are salient features of quantitative research. This research paradigm is also known for its avowed objectivity which attempts to minimize researcher bias and preferences to optimum levels. There are, therefore, well-established procedures that quantitative researchers employ almost at every stage of data collection and analysis. This facet of quantitative research leads it to assume that its findings possess universal generalizability. Variability in human behaviour and research contexts may challenge this assumption though. In short, quantitative research supposedly produces reliable and valid results. Not only this, use of statistical software reduces data analysis time.

Quantitative research is not without its limitations also. Researchers point to the element of human subjectivity which quantitative research is unable to eliminate because of its focus on averaging responses of the subjects. Brannen (2005 p. 7) argues that quantitative research is "overly simplistic, decontextualized, reductionist in terms of its generalizations, and failing

to capture the meanings that actors attach to their lives and circumstances". This limitation can, however, be minimized in its effect by using qualitative methods alongside quantitative since they have been described as aptly contextualized, explanatory and thereby, more generalizable. This is exactly what I have decided to do with my data. I plan to use the quantitative results and describe them qualitatively wherever relevant and appropriate.

4.1.3. Qualitative research

Qualitative approach seeks to present the significance of human experience in a social context (Denzin and Lincoln, 2004). Based on descriptive and interpretive analysis, the approach attempts to unveil nuances of meaning which are observable in the social phenomena. A researcher using qualitative paradigm can use different qualitative methods such as ethnography, grounded theory, discourse analysis, Interpretive Phenomenological Analysis (IPA) etc. for his study depending on the nature of the research focus and research questions. Ethnography investigates "how social action in one world makes sense from the point of view of another" (Agar 1986, p.12). Grounded theory allows a theory to generate from the data without any pre-established hypothesis (Charmaz, 2006). Discourse analysis is concerned with interpretation of the linguistic features of a text above the level of a sentence (Potter, 1996). IPA deals with "inner experiences unprobed in everyday life" (Merriam, 2002, p.7). Since my study is based on cohesion analysis of academic writing and perceptions of teachers and students about cohesion and academic writing, I chose to use discourse analysis, and insights from IPA as research methods for my study. The former is about interpreting the role of intersentential cohesion devices in creating texture in students' essays while the latter is an attempt via survey and interviews to understand the phenomena of pedagogic and learning experiences in Saudi EFL context.

Qualitative approaches came to the fore as a result of discontent with use of excessive measurement in quantitative research. Reason and Rowan (1981) in Coolican (2014 p.55) sum up the matter appropriately:

There is too much measurement going on. Some things which are numerically precise are not true; and some things which are not numerical are true. Orthodox research produces results which are statistically significant but humanly insignificant; in human inquiry it is much better to be deeply interesting than accurately boring.

Qualitative research, therefore, focused on what quantitative research had neglected i.e. understanding "behaviour and institutions by getting to know well the persons involved, their values, rituals, symbols, and their emotions (Nachmias and Nachmias, 1987 p. 287-288). Merriam (1988) found that qualitative research involved description, fieldwork, induction, processes, subjective world view of the participants, and researcher immersion into the research setting. Qualitative research is specifically useful in gathering culturally specific information about the values, opinions, behaviors, and social contexts of particular populations (Mack, et. al. 2005). Typically, data is collected from multiple sources such as life histories, direct observations, case studies, field studies, surveys, in-depth interviews, and document analysis (Best and Kahn, 2003; Dawson, 2007; Patton, 1990). Moreover, qualitative research design is flexible and evolving and can be adapted to changing situations. This means that the research focus is narrowed down only gradually and the analytic categories and concepts are defined during, rather than prior to, the process of the research (Dornyei, 2007). With a relatively smaller sample size, qualitative research becomes interpretive as the researcher allows his subjective world view to interpret the data (Miles and Huberman, 1994; Haverkamp 2005). A typical use of qualitative research has been to explore unidentified domains. It does not require recourse to previous research or literature if the target research area is absolutely new (Eisenhardt 1989). Mack et. al. (2005) consider qualitative methods important because of their potential to study intangible variables such as class, gender, ethnicity; their use of open-ended questions which can elicit authentic participant response; and the flexibility to investigate 'why' and 'how' from the participants.

Since the mid-1990s, qualitative research has been consistently applied in research on language studies (Duff, 2006). There is a gradual cognizance of the fact that most aspects of linguistic enquiry are conditioned by social, cultural, and situational variables for which qualitative research is highly appropriate and effective. (Dornyei, 2007).

Qualitative research is based on the premise that human behaviour can be understood only from meaning which people attach to the phenomena outside (Punch, 2005), and there are differences in individual perceptions of meaning among people. Qualitative research, thus,

tries to unveil social phenomena as seen by the participants usually referred to as "insider perspective".

Dorneyi (2007 p.40) suggests that qualitative research is particularly effective in applied linguistics where processes under study are dynamic in nature and require longitudinal research so that 'sequential patterns' and the resultant changes are dealt with appropriately.

The small sample size, most quantitative researchers, believe cannot predict reliable and valid generalizations (Dorneyi, 2007; Duff, 2006). Similarly, since qualitative research is not as rigid as quantitative in following set procedures for data analysis, researcher's skill as an analyst can be questioned. Closely related to this is the absence of methodological rigour in terms of statistical procedures and measurement tools which is the hallmark of quantitative research. Because of limited generalizability, qualitative research is vulnerable to create theories which could be either too narrow or too complex (Eisenhardt, 1989). The processing of qualitative data is very time consuming. However, researchers point out that qualitative research can be unreliable and difficult to replicate which is, perhaps, its major limitation. Eysenck (2000) argues that since qualitative approach is subjective and impressionistic, the researcher individuality and bias may affect categorization and interpretation of information.

4.1.4. Quantitative versus qualitative research

Richards (2005) states that both quantitative and qualitative methods are not much different as they collect data from the same world. Qualitative researchers also collect information which is numerical (e.g. the age of the participants) and the contrary is done by quantitative researchers (e.g. gender or nationality of the participant). However, this is a simplistic view, and there are discernible differences between the two approaches.

Qualitative research is more flexible than quantitative. The major differences in these approaches is in the procedures for data analysis, the research questions, data collection tools, types of data produced, and flexibility in the research design (Davies, 1995; Mack et. al. 2005). The table (T1-RM) adapted from Gay (1997), Dorneyi (2007) and Mack et. al. (2005) illustrate some of the salient differences between the two research paradigms:

T1-RM: Comparison between quantitative and qualitative research paradigms

Quantitative Approaches	Qualitative Approaches
Descriptive	Interpretive
Use numerical data	Use extensive narrative data
Explain, predict, and/or control phenomena of interest	Gain insights into phenomena of interest
Data analysis is mainly statistical	Data analysis include the coding of the data and production of verbal synthesis
Primarily deductive	Primarily inductive
Attempt to prove hypothesis	Attempt to generate hypothesis
Objective i.e. value-free	Subjective
More focused and outcome-oriented	Holistic and process-oriented
Study one or small number of variables	Study many variables (how, why, what)
Concerned with generalizability of results	Concerned with meaning of results
Intervene and control variables	Do not intervene and control variables
Focus on meaning in general	Focus on meaning in particular
Regulated and structured macro-perspective of reality	Flexible and context-sensitive micro-perspective of reality

4.1.5. Mixed-methods and triangulation

Mixed-methods refer to the combination of multiple methods or approaches such as the qualitative and the quantitative which can be applied at the data collection or data analysis stages to obtain "depth of qualitative understanding with the reach of quantitative techniques" (Fielding, 2012 p.124). In other words, qualitative data are quantified to be integrated with quantitative data in order to “answer research questions or test hypotheses addressing relationships between independent (or explanatory or predictor) variable(s) and dependent (or response or outcome) variables” (Sandelowski, et al 2009 in Fielding, 2012 p.126). Similarly, recurrent patterns in qualitative data are quantified in order to “allow analysts to discern and to show regularities or peculiarities in qualitative data they might not otherwise see . . . or to determine that a pattern or idiosyncrasy they thought was there is not” (ibid). Mixed-methods approach is, therefore, "interpretive as written and verbal data are collected and transcribed so that the texts can be fragmented into ideas, categories and themes by the researcher. So such a mix involves mixed methods as well as an integrated paradigm" (Greener, 2008 p.35). Following these theoretical assumptions, I proposed to

make use of both quantitative and qualitative methods so that I could segregate the sample texts into sentence units, rhetorical moves, and cohesive categories as well as split teachers and students beliefs about cohesion and academic writing into themes and categories. Mixed methods allowed me to relate numbers with words to arrive at a satisfactory understanding of the phenomena I was interested in.

Triangulation, on the other hand, is used to "describe "severe" statistical tests of correlation between alternative quantitative measurements and is employed to test the accuracy of those measurements" (Kadushin, et al. 2008 p.46). It aims at collating the results from qualitative and quantitative studies to ascertain the extent to which these methods arrive at the same conclusions. Dawson (2007) believes that triangulation could be a useful approach to overcome shortcomings in both qualitative and quantitative research thereby resulting in high level of reliability and validity. Miles et. al. (2014 p.299) suggest that triangulation can be identified:

by *data source* (which can include persons, times, places, etc.), by *method* (observation, interview document), by *researcher* (Investigator A, B, etc.), and by *theory*. *data type* (e.g., qualitative texts, audio/video recordings, quantitative data). How to choose which? The aim is to pick triangulation sources that have different foci and different strengths, so that they can complement each other. In some senses, we are *always* faced with triangulating data, whether we attend to it or not.

My use of the triangulation for this study is primarily concerned with '*method*' and '*data type*' sources. As a matter of fact, I used students' samples of writing and open-ended teacher interviews as sources of qualitative data for the qualitative analysis, and structured survey questionnaires from the teachers and the students as sources of quantitative data for quantitative analysis. Finally, I triangulated the results of the qualitative and the quantitative analysis to arrive at the findings. Hence, I could compare and contrast survey results with textual evidence and teachers' interview responses. Triangulation helped me to validate my data analysis since the main constructs of the study were investigated and analyzed from different perspectives. This aspect of my research was further strengthened by the reliability analysis (Appendix 7) and data normality tests (T1-MS & TI-RQ3) which I conducted before selection of the statistical tests and analysis of the data.

4.2. Research Aim and objectives

This research study sought to investigate the use of cohesive devices in the creation of argumentative essays written by Saudi EFL undergraduate students as well as the behaviour of cohesive devices in the rhetorical structure of these essays. It also attempted to investigate the perceptions of teachers and students of academic writing in Arab EFL context about the teaching and learning of cohesion and academic writing. The main source of the data was students' argumentative essays. To triangulate the study, the researcher also used structured questionnaires for teachers and students to measure their perceptions. Teachers also participated in an open-ended interview. The results of the study were anticipated to consolidate our understanding of not only how Saudi EFL students used cohesive devices in their attempt to write academically appropriate texts, but also the resultant characteristics of cohesion. The study had been, therefore, planned to achieve one main aim and three objectives which were generated from review of the related literature on the focus area of study as well as identification of the scholarly gaps which still persisted in Saudi EFL context.

4.2.1. Main research aim

The mainstay of this research identified was;

- to explain the role of cohesion as a text-forming resource in the creation of argumentative essays written by Saudi undergraduate students of English as a Foreign Language (EFL).

4.2.2. Research objectives

I identified the following objectives which I believed would facilitate achievement of the main aim:

- a. to explain the role of intersentential cohesion as a non-structural resource in the creation of texture in the argumentative essays written by Saudi undergraduate students of EFL.
- b. to investigate how cohesion functions in the rhetorical structure of these argumentative essays.
- c. to seek perceptions of teachers and students about the teaching and learning of academic writing and cohesion in Arab EFL context.

4.3. Research questions

I generated one main research question and three subsidiary questions with a view to achieving the aim and objectives of the study respectively.

4.3.1. Main Question

How does cohesion as a text-forming resource contribute to the creation of argumentative essays written by Saudi undergraduate students of EFL?

4.3.2. Subsidiary Questions

- i. How does inter-sentence cohesion as a non-structural resource contribute to the creation of texture in the argumentative essays written by Saudi undergraduate students of EFL?
- ii. How does cohesion function in the rhetorical structure of these argumentative essays?
- iii. What are teachers' and students' perceptions about the teaching and learning of academic writing and cohesion in Arab EFL context?

4.4. Study design – Brief overview of design.

The choice of research design refers to the informed choices made in regard to the particular methodology and procedures undertaken to complete the research study. In other words, a research design "specifies whether the study will involve groups or individual subjects, whether the study will make comparisons within a group or between groups, and how many variables will be included in the study" (Gravetter and Forzano, 2003 p. 157). Research design is primarily concerned with supplying the evidence which can provide a very clear answer to the initial research question/s. Research design 'deals with "a logical problem and not a logistical problem" (Yin, 1989 p.29). Generally, a research design outlines concerns about research setting, participants, sample selection and size, data collection methods and tools, data analysis instruments and procedure, reliability and validity, and ethical issues.

The present study was basically an exploratory and interpretive qualitative research which assumed a mixed-method paradigm due to the quantitative element of descriptive statistics, frequency counts, percentage scores, nonparametric correlation and variance analysis in regard to cohesive devices and structured survey questions which were used to elicit perceptions about the teaching and learning of academic writing and cohesion in Saudi EFL context. The study adopted a qualitative design to analyze Saudi EFL students written academic essays, structured

questionnaires and open-ended questions via interviews from the teachers. Following Shavelson and Towne (2002), it had been designed to answer "*what*" and "*how*" questions which were typical of an exploratory inquiry. Textual analysis of these essays was primarily based on insights and models from SFL (Halliday and Hasan, 1976); ESP/EAP/Academic Literacies/Genre studies (Hyland, 1990); and ELT (McCarthy, 1991; Thornbury, 2005) which recommend that analysis be done in socio-cultural context. Hence, a qualitative design that investigates phenomena in naturalistic setting (Marshall and Rossman, 2006) was adopted in order to arrive at contextually embedded understanding (Strauss and Corbin, 1990) of the research aim and objectives. A researcher's focus, in qualitative study, is not on one theme but on multiplicity of variables that interact in real-life situations. Therefore, any data which is not relevant to the context is likely to render the measurement instruments unreliable. Following Zohrabi (2013 p. 254) that "using different types of procedures for collecting data and obtaining that information through different sources (learners, teachers, program staff, etc.) can augment the validity and reliability of the data and their interpretation", I decided to triangulate the primary data of my research i.e. students argumentative essays in order to increase the reliability of the data and the findings as well as facilitate replication of the study for further research (ibid). Hence, the two structured questionnaires on a five-point Likert Scale which measured pedagogic and learning beliefs about academic writing and cohesion and teachers open-ended interviews were used as data sources for triangulation. These data were used to corroborate or contradict the findings of Research Question 1 and 2 related to textual analysis. However, the same data became the primary data for Research Question 3, and was triangulated by textual evidence from students' argumentative essays.

Both the essays and the subsequent data obtained from structured questionnaires and interviews were thematically analyzed. However, following studies in SFL, ESP/EAP, and ELT (see Halliday and Hasan, 1976; Halliday and Matheison, 2004; Martin and Rose 2003; Eggins 2004, 2010; Hyland, 1990, 2006; etc.), qualitative analysis was triangulated to include some quantitative analysis, with the intent of quantifying observed qualitative phenomena. Blaikie (2004) and Denzin and Lincoln (2004) suggest that quantitative studies stress upon the measurement and analysis of links between variables, that can be employed to quantify the phenomenon and are also a tool for implementation of certain kinds of data and its interpretation. Quantitative methods were used in collection of the writing samples i.e. argumentative essays, in

counting sentence units (SUs) for research questions 1, 2, and 3, in doing frequency counts and establishing appropriacy index for analysis of inter-sentence cohesion based on SFL models, in identifying SUs in the rhetorical structure of the sample texts and cohesive devices therein the stages and moves, and in quantifying the results of the structured questionnaires and teachers' interviews about the teaching and learning of academic writing and cohesive devices in Arab EFL context. Qualitative methods were employed to analyze the role of intersentential cohesion in creating texture, functioning in the rhetorical structure, and interpreting teachers' and students' perceptions.

4.4.1. Survey design

The survey was designed following the notions of academic writing, cohesion and texture, and rhetorical structure that I had operationalized and used for the formation of the research questions for this study -- academic writing as manifestation of both linguistic and extra-linguistic elements which are appropriate to the target genre (argumentative essays for this study); cohesion as non-structural resource in the creation of texture; rhetorical structure based on Hyland's (1990) model of argumentation; and pedagogic and learning experiences about academic writing and cohesive devices in Arab EFL settings. So, I was interested in generating items for the questionnaire that could elicit response for all potential aspects of the operationalized concepts and provide appropriate response to Research Question 3, and triangulate data analysis for Research Questions 1 and 2. As such, 50 items thematically generated from these concepts and mentioned in the review of literature though not in the sequence in which they occurred on the questionnaires were presented to the subjects to record their responses. These 50 items were then categorized into six factors: Teaching and Learning of academic writing (TL); Arabic Language and Culture (ALC); Language Knowledge (LK); Text Organization (TO); Cohesion (COH); and Rhetorical Functions (RF). The students' questionnaire had the same items which were changed to "*I can do*" statements (Appendix 13), and followed the same coding as for the teachers' questionnaire. Table T2:RM presents the factors with their items and the coding scheme:

T2:RM: Factor distribution of questionnaire items for teachers' perceptions

Code	Teaching & Learning of Academic Writing: TL
TL1	Students write in English for academic purposes quite often.
TL2	Students also write in English for non-academic purposes
TL3	Students feel gratified when appreciated for my writing skills.
TL4	Students like to do collaborative writing tasks.
TL5	Students like to work independently.
TL6	Students receive constant feedback and support from teachers.
TL7	Students receive positive feedback from family and peers.
TL8	Students are explicitly taught academic writing functions.
TL9	Students are motivated enough to learn writing skill for academic purposes.
TL10	Academic writing is useful to students' present and future needs.
TL11	Students relate competence in writing to real life benefits.
TL12	Students freely express their positive learning experiences with their peers.
TL13	Students freely express their negative learning experiences their peers.
Code	Arabic Language & Culture: ALC
ALC1	Writing in English is the same as writing in Arabic.
ALC2	Students use knowledge of Arabic while writing in English.
ALC3	Good writing skills are highly valued in Arab culture.
ALC4	Arab culture values argumentation.
ALC5	Arab culture values critical judgment.
Code	Language Knowledge: LK
LK1	Students have sufficient vocabulary to help me write in English.
LK2	Students know how to use knowledge of grammar to write correctly in English.
LK3	Students know how to write different types of sentences.
LK4	Students know how to write topic sentence and thesis statement.
LK5	Students know how to write supporting detail for the topic sentence.
Code	Text Organization: TO
TO1	Students know how to write different types of paragraphs.
TO2	Students know how to write cohesive and coherent paragraphs.
TO3	Students know how to write argumentative essays.
Code	Cohesion: COH
COH1	Students make appropriate use of pronouns.
COH2	Students make appropriate use of coordination.
COH3	Students make appropriate use of subordination.
COH4	Students make appropriate use of articles/determiners.
COH5	Students make appropriate use of collocations.
COH6	Students make appropriate use of repetition of ideas.
COH7	Students replace a word or a phrase or a clause for variety.
COH8	Students use ellipsis (omission of a word, phrase or clause).
Code	Rhetorical Functions: RF
RF1	Students use counter arguments while writing in English.
RF2	Students express problems related to the topic.
RF3	Students write solution to these problems.

RF4	Students write logically that appeals to the reader.
RF5	Students are explicit in my expression.
RF6	Students are suggestive in my expression.
RF7	Students use cause and effect patterns effectively.
RF8	Students use comparison and contrast patterns effectively.
RF9	Students use examples to substantiate their point of view.
RF10	Students develop independent opinions.
RF11	Students know how to agree with a proposition.
RF12	Students know how to refute a proposition.
RF13	Students know how to take a stance.
RF14	Students know how to substantiate my stance.
RF15	Students know how to synthesize information.
RF16	Students use facts and figures to illustrate a point of view.

There were, however, a few challenges in regard to the administration of the survey. Questionnaires are vulnerable to incomplete responses or misinterpretation of the items (Gillham, 2000). The number of items (50) on the survey were also quite demanding especially for the students. The third challenge was presenting the thematically same items to the students and the teachers. In order to minimize the weaknesses of the survey design, I adopted a number of strategies which I assumed would help me build in greater reliability into the survey design, and the findings would be more generalizable and comparable.

First, I piloted the survey with myself and two other colleagues to see the time spent in answering the questions. It took us 15 to 20 minutes to complete the survey which led me to assume that both the students and the teachers could do it without feeling stressed. According to Brown (2001) and Gillham (2000) face-to-face, group, and online administration of the questionnaires can yield a higher response rate than through other methods of collection such as self-administered where questionnaires are posted to the respondents. For the students, I used 'group' administration method, and the class teachers at the ELCY were requested to monitor the conduct of the survey and help students with any issues in regard to any item on the questionnaire. For the teachers' questionnaire, the respondents could access an online link for "surveymonkey" and work to their own

schedule. There was no pressure of any sort on the subjects as they were asked to sign a consent form which allowed them the choice to opt out of the study at any stage.

Following Brown (2001), I tried to use simple terminology for the items to avoid ambiguity and difficulty. Therefore, the terminology used in the items was simple as was generally found in the EFL course books on writing (e.g. pronouns, coordination, compound sentence etc.) hoping this would facilitate both the students and the teachers to complete the survey. I also tried to draft the items whereby both the subjects could 'personalize' them. So, without changing the thematic content, the students received "*I can do* " statements, while the teachers "*The students/can ...* ". I also provided explanation in parenthesis for a few of the terms which I felt might be challenging, especially for the students (e.g. ellipsis; substitution). There were no time constraints on the subjects for completion of the survey.

The other source of data for triangulation was the interview which is considered a valid and reliable form of obtaining information about respondent's perceptions (Johnson and Turner, 2003). Three open ended questions were designed for teachers' interviews. The teachers signed a consent (Appendix 4) form before participating in the interview and had the choice to opt out of the study at their will. The questions were based on major foci of the study. Interview question 1 elicited teachers' beliefs about students' use of cohesive devices in academic writing in regard to strengths and weaknesses and was linked with Research Question 1 of the study. Interview question 2 was matched with Research Question 2 and sought to seek teachers' perceptions about the use of cohesive devices in the rhetorical structure of the argumentative essays. Interview question 3 tied up with Research Question 3 and was also a component of this question. It measured pedagogic and learning experiences in respect to academic writing and cohesive devices. The interviews were audio recorded, transcribed and then put to analysis. Recurring themes (4.4.9.3) were grouped and measured for their frequency and percentage to see the prominent trends.

4.4.2. Research Setting

The study was conducted at the English Language Center, Yanbu Industrial College, Yanbu Al-Sinaiyah, Saudi Arabia where the researcher had worked as EFL Lecturer for six years. A detailed discussion on education in Saudi Arabia especially in regard to EFL has been

presented in Chapter 1 and 2 of this thesis. This section deals with the real-life research setting from where the main data i.e. argumentative essays of the students had been collected for data analysis. Undergraduate students from the ELCY also responded to a structured questionnaire which had been designed to measure their perceptions about the teaching and learning of academic writing and cohesive devices in Arab EFL context. I decided to reach out to wider EFL teaching community in the Arab academic world for collection of teachers' responses on structured questionnaire and open-ended questions via interviews. The primary aim for this strategy was to collect a larger sample which could provide statistically significant results. Hence, teachers who are teaching or had taught academic English in Arab EFL context were selected as participants for collection of the sample.

The ELC at Yanbu Industrial College is run by the Directorate of Royal Commission at Yanbu - a public sector organization. It also overlooks three other institutes which include Yanbu Technical Institute, and University College Yanbu for male and female respectively. The ELC, which is accredited with CEA for its courses, is responsible for design and delivery of various English language programmes for Foundation, Associate, and Undergraduate level students across these institutes which are officially referred to as Royal Commission Yanbu Colleges and Institutes.

The students on the undergraduate programme are enrolled in different subject specialism for a Bachelor's degree such as Chemical Technology, Electrical Technology, Mechanical Technology, Industrial Management Technology etc. They take a mandatory two semester Academic English course ENG 301 and ENG 302 to help them develop their academic writing skills which they would use for writing in their subject specialism, especially the final term report or thesis. *Writing Academic English* (4th Ed) by Oshima and Hogue (2006) is the prescribed course book which is taught over two semesters. The teachers are also encouraged to design and use supplementary materials to consolidate the writing skills of the students. Argumentative essay is an essential component of the course design which students learn and practice in the second semester in ENG 302. Course assessment is based on quizzes, in-class assignments, mid-term and final-term examination. The students are expected to produce a full-length essay including the argumentative along with other genre

such as narrative, descriptive etc. both in the mid-term and the final-term examination. A score of 60% is the minimum pass percentage. The sample essays for the present study were collected from the corpus of essays the students had produced either in the mid-term or the final-term examination (Appendix 6).

4.4.3. Sample details

In research methods, population refers to the "entire set of individuals of interest to the researcher" whereas, a sample is a selected group of individuals from the population which is investigated and the results are generalized to the entire population (Gravetter and Forzano, 2003 p. 115). The collected sample is likely to be biased since the researcher does not have any control over the representativeness of the sample. However, these shortcomings can be overcome if the researcher tries to ensure that his samples are reasonably representative and not strongly biased. Secondly, the researcher can provide a clear description of how the sample was obtained and who the participants were (ibid p. 126). Sample for the current study comprised of:

1. Argumentative essays written by Saudi EFL undergraduate students taking ENG 302 (Academic Writing Course) in mid or final term examination at the English Language Center (ELCY) at Yanbu Colleges & Institutes, Saudi Arabia. These handwritten essays were typed in word document without any correction to the errors of any sort so as to maintain originality and transparency (Appendix 6).
2. Structured questionnaire to be answered by undergraduate students of academic writing at the ELCY (Appendix 13).
3. Structured questionnaire to be answered by teachers in the Arab EFL context via surveymonkey.com (Appendix 12).
4. Personal interviews with teachers of academic writing in Saudi Arabia to be audio-taped and later transcribed for analysis (Appendix 19).

Argumentative essays were chosen because they are not only a common genre of writing in academic settings but also offer a very clear insight into the writing proficiency that student

writers have acquired over the years. They are information-rich source of data for textual analysis from a number of foci - the use of cohesive devices and rhetorical functions being the significant ones.

Questionnaires are a very convenient and time-saving form of data collection from a larger sample (Brown, 2001; Jordan, 1997). One major weakness of questionnaires is that the participants can misinterpret both the open statements and structured/semi-structured items. In addition, low turnout of participant response is another threat. For the present study, both these limitations had been dealt with by piloting the study. The questionnaires can be revised to remove any ambiguities while the sample size can be managed by accessing larger sample size than has been actually planned for the study.

I used purposive sampling for data collection. Purposive sampling, also known as judgmental, selective or subjective sampling, is a type of non-probability sampling technique, and is "widely used in qualitative research for the identification and selection of information-rich cases related to the phenomenon of interest" (Palinkas et al. 2013). Patton (2002) believes that it is most effective when doing research with limited resources. The participants of the study are knowledgeable and well-experienced in the field of interest (Cresswell and Plano Clark, 2011). One major limitation of purposive sampling is that the sample is not representative of the population and can have limited generalizability. However, for researchers using qualitative or mixed methods it is more of a choice than a weakness. Homogenous sample, a type of purposive sample, was chosen for this study because its units share the same characteristics or traits. A homogeneous sample is often chosen when the research question that is being addressed is specific to the characteristics of the particular group of interest, which is subsequently examined in detail (ibid). So, the subjects and the essays were intentionally selected as per criteria that the researcher had set. The results of the analysis of the written essays were triangulated with the results of the analysis of questionnaires and interviews which elicited teachers' and students' perceptions.

4.4.4. Sample characteristics

The samples of students' writing were collected from the ELCY which entertains male students only owing to socio-cultural constraints. Exclusion of the female students from this

study was anticipated to have certain implications on the findings as I could not explain gender differences both for the textual features of students' writing, and perceptions about academic writing and cohesive devices. Nevertheless, the students who wrote the sample essays in an examination setting were all male monolingual students aged 21 to 23 from Saudi Arabia who shared the same culture despite differences in the social class or the family background. Before starting this undergraduate academic writing course, all had completed two semesters of English language training in the Foundation Year Programme which trained them in the four language skills. In addition, they had also completed compulsory modules on "Report Writing" and "Communication Skills" at the Associate Diploma level which lead to enrolment in the undergraduate programme. After passing the Foundation and the Associate Degree in two years, these students, subject to merit qualification with 60% minimum for English course scores at the Associate Degree level, were enrolled in the undergraduate programme in different subject specialism such as the Mechanical Technology, Electrical Technology, Chemical Technology etc. They completed one semester of Academic Writing I module ENG 301 before they were offered Academic Writing II ENG 302. The texts for the present research were collected from Mid or Final Term examination scripts of the students of ENG 302. My choice for purposive or homogeneous sample referred to in the previous section seemed appropriate because these students had gone through the same English language training for more than two and a half years at one institute, were from the same lingual and cultural background, of almost the same age group, and shared the same academic interest i.e. to graduate successfully in their respective discipline. These students also completed the structured questionnaire to share their beliefs about academic writing and cohesive devices.

The other source of data were the teachers of academic writing in the Arab EFL setting. I decided to reach out to the wider EFL teaching community for collection of teacher perceptions through an online structured questionnaire similar to the one done by the students manually so that I could study responses from beyond the Saudi context. English language teachers in Saudi Arabia as mentioned in Chapter 1 and 2 of this study are Native English speakers, non-Arab Arabic speakers, and non-native English speakers with qualifications ranging from Bachelor to a PhD. A good number also have Celta or similar other teaching qualifications. Similarly, they have varied length of English language

teaching experience. As for the teacher interviews, I, for the sake of convenient access, interviewed 16 teachers from the ELCY, 12 from the English Language Institute, University of Jeddah (my current workplace), and 2 from the English Language Institute, King Abdul Aziz University, Jeddah. I targeted those teachers only, as stated in the Consent Form and advertisement of the survey, who had or were teaching academic writing. This was also compatible with the norms of purposive/homogeneous sampling since the subjects were assumed to be knowledgeable about the topic and shared common features in regard to the professional practice.

4.4.5. Sample size

The sample size was determined by insights from Best and Kahn (2003 p.32) who consider a sample size of 30 large, and Dornyei (2003) who proposes a minimum number of 100 respondents to achieve statistical significance. This study collected 30 samples of student essays for textual analysis of cohesion (research questions 1, 2), 30 teacher interviews, and 112 teachers' responses for structured (on a five-point Likert Scale) questionnaire, and 60 students' responses to structured questionnaire in order to answer research question 3. The conclusions were generalizable with the subjects studied. This is supported by Larson-Freeman and Long (1991) who argue that generalizability of the findings is not dependent upon the number of subjects in the study. Hence, it was assumed that sample size based on insights from Best and Kahn (2003) and Dornyei (2003) referred to above would not only be manageable for analysis but also suffice to the analytical needs of the present study in terms of qualitative and quantitative analysis, statistical results, reliability, validity, and generalizability. More specifically, the sample size for the present study included:

1. Argumentative essays (n=30) written in an examination setting (Mid or Final Term).
2. Structured questionnaires (n=112) completed by teachers of academic writing in Arab EFL setting.
3. Interview (n=30) attended by teachers of academic writing in Saudi EFL setting.
4. Structured questionnaire (n=60) completed by undergraduate students of academic writing at ELCY, Saudi Arabia

4.4.6. Recruitment method

The study sought formal approval from Research and Ethics Committee, De Montfort University (Appendix 2) before initiating collection of data. Formal approval was also obtained from the Course/Programme Coordinator, Graduate Programme, English Language Center at Yanbu Industrial College, Saudi Arabia before collection of examination scripts and completion of structured questionnaire from undergraduate students (Appendix 3). Participant information sheets and consent forms (Appendix 4) were designed and provided to the teachers of academic English in Arab EFL context who participated in the study. These documents explicitly stated the purpose and usefulness of the study as well as their willingness and subsequent anonymity as participants.

The collection of essays was based on the following criteria:

- a. They were not less than 250 words in length.
- b. They were produced in either the Mid-Term or the Final-Term examination.
- c. They were set for undergraduate male students at the ELCY.
- d. They represented a sample of courses studied by students in the Faculty.

After the ethical approval had been obtained from DMU, the Course Coordinator at the ELCY was formally requested via email (Appendix 3) to allow and arrange for the sample texts from the Mid and Final Term examinations. The structured questionnaire for the students was completed at the ELCY in the presence of the class teachers so as to help students complete the survey manually. I used "surveymonkey" as the online tool to reach out to the teaching fraternity for administration of the structured questionnaire for the teachers. I used email, Facebook, and LinkedIn contacts to approach teachers in the Arab EFL context. I also requested my friends and colleagues to share the survey link to their acquaintance. For the interviews, I was able to persuade my personal contacts at the ELCY, University of Jeddah, and King Abdul Aziz University to participate in the study.

4.4.7. Limitations of the research design

The research design for the present study has certain limitations which may affect generalizability of the results to other EFL contexts, especially in the Arab world. The study was conducted in one institution only which meant that the sample would be a tiny proportion of the population. Moreover, $n = 30$ of the students' writing was also assumed to be a very small portion of the population, and keeping in view the likely difference in undergraduate programme structure, course design, and learning and pedagogic contexts and experiences, the textual analysis of cohesion would also yield limited generalizability. This might also be true of the students' perceptions recorded through the structured questionnaire. The responses could be valid and reliable for the research context as they were completed by the student writers who produced the sample texts or had been on the same programme in the same institution. How other students, especially in other EFL settings think about the items of the questionnaire was beyond the scope of the present study. Teachers' questionnaire though approached wider Arab EFL community did not aim at gauging perceptions of the teachers outside the Arab EFL context, and therefore, may not reflect views of the teachers from other parts of the EFL map.

4.4.8. Treatment of the data

This section details the data that was collected for the study and the analytical procedures adopted thereafter.

4.4.8.1. The data

Marsh (1988) in Jupp (2006 p. 57) points out that "data ... is produced, not given"; that is, researchers choose what to call data, it is not just 'there' to be 'found'. Data can be qualitative or quantitative depending on the research aims and objectives of the researcher. The data for this study had been identified from three sources: the students' argumentative essays, the questionnaires, and the interviews.

I created a corpus of cohesive devices that were identified in students' essays. Descriptive statistics in regard to the number of words per text (WPT), number of Sentence-units per text (SUPT), and number of cohesive devices per text (CDPT) were run for sum, mean (M),

standard deviation (SD), median (Mdn), and interquartile range (IQR) using SPSS. In addition, Reliability analysis, data normality tests were also conducted. Finally, nonparametric correlation and variance analyses were performed to find out statistically significant associations and comparisons between the different variables of the study.

The inter-sentence cohesive devices, and rhetorical structure of the argumentative essays formed the main data which I subjected to both qualitative and quantitative analysis. Teachers' and students' perceptions elicited through structured questionnaire, and EFL teachers' interviews was another data set that I used to triangulate the study, and also analyzed qualitatively and quantitatively. The table (T3-RM) below refers to both type of data that were collected for the present study:

T3-RM: Qualitative and quantitative data in the study

Qualitative data	Quantitative data
Intersentential cohesive devices in argumentative essays	Frequency counts of appropriate, inappropriate, and overused cohesive devices
Rhetorical structure of the argumentative essay Function of cohesive devices in the rhetorical structure	Frequency, incidence of cohesive devices in the rhetorical structure of argumentative essays
Teachers' perceptions about the dynamics of academic writing and cohesion as elicited from teachers' interviews	Teachers and students' perceptions about the teaching and learning of academic writing and cohesion as elicited from structured questionnaires

Halliday and Hasan's (1976) taxonomy and analysis of cohesion devices was chosen for analysis of Research Question 1, 2 and 3. The following table (T4-RM) provides a brief overview of the cohesive devices that the researcher planned to analyze for the present study:

T4-RM: Grammatical and lexical cohesion (Halliday and Hasan, 1976)

Grammatical cohesion		Lexical cohesion	
1	Reference	1	Repetition
2	Substitution	2	Synonyms
3	Ellipsis	3	Superordinate
4	Conjunction	4	General word
		5	Collocations

4.4.8.2. Data analysis

Hasan (1984) proposes the use of cohesion analysis to observe the system of cohesive ties that function within the text. These ties are lexico-grammatical resources which create textual unity and texture by associating elements within the text to each other. Hence, cohesion from the perspective of text analysis system has the potential to explain how and why a text is written in a specific way and why and how a text is interpreted in a certain way. This section details data analysis procedures adopted for the study.

First, the coding scheme for analysis of cohesive device is presented followed by data analysis approaches to the research questions respectively.

4.4.8.3. Coding scheme for cohesion analysis

Halliday and Hasan (1976 p.333-38) developed a comprehensive coding scheme for the treatment of the data intended for cohesion analysis. I decided to adapt their coding scheme as presented in Table (T4-RM). Since Halliday and Hasan's (1976) scheme was developed for cohesion analysis of a narrative text which can lend itself to varied incidence of the presence of cohesive elements, they also coded the typology for each subcategory of the grammatical and lexical cohesion such as R11 for the singular masculine pronominals *he*, *him*, *his*. However, I restricted my coding only to the main cohesion categories and their respective subcategories. Assuming that students' argumentative text is different from the narrative as genre and that too with a limited number of word length (270 - 525 for this study), all types of cohesive devices might not be as pervasive in argumentative writing as they are in a longer narrative text. For instance, ellipsis and substitution do not feature prominently in academic writing (McCarthy, 1991). and so are the first person pronouns which are very less frequent in academic writing (Holes, 1984). This, however, did not exclude analysis and explanation of the cohesion types from the study. I proposed to explain the prominent cohesive types as revealed in the results, and discussed their performance in regard to the creation of texture for Research Question 1, and behaviour in the rhetorical structure of the sample essays for research Question 2. I applied this adapted coding scheme to represent cohesive patterns in the data. I allocated an index number to each sentence, and

entered the total number of ties in any clause/sentence in the relevant column. Then for each tie, the type of cohesion and its characteristics were identified and explained.

T5-RM: Coding scheme for cohesive devices (Halliday and Hasan, 1976 p.333-338)

	Types of cohesion	Coding
1	Reference Personal reference Demonstrative reference Comparative reference	R R1 R2 R3
2	Substitution Nominal substitutes Verbal substitutes Clausal substitutes	S S1 S2 S3
3	Ellipsis Nominal ellipsis Verbal ellipsis Clausal ellipsis	E E1 E2 E3
4	Conjunction Additive Adversative Causal Temporal	C C1 C2 C3 C4
5	Lexical cohesion Repetition Synonymy Superordinates General nouns/words Collocation	L L1 L2 L3 L4 L5

4.4.9. Analytical procedures

Table (T6-RM) provides an overview of the analytical procedures that were chosen for the present study:

T6-RM: Data Analysis Procedures

	Instrument	Participants	Analysis	Aim/Rationale
RQ 1	Argumentative Essays (n=30)	Students of academic writing at ELCY, Saudi Arabia	SU analysis Use of software for Quantitative analysis (SPSS - mean, standard deviation, median; interquartile range; reliability analysis: Cronbach Alpha; data	To segregate the text into measureable chunks/sentences To test the data for normal distribution To test the reliability of the data To check frequency of cohesive devices in context

			normality assumptions; correlations; variance analysis)	To find out statistically significant associations and comparisons between the data variables To develop index for appropriate & inappropriate use of cohesive devices To correlate and compare cohesion devices with exam scores To measure role of cohesion in creating texture
RQ 2	Argumentative Essays (n=30)	Students of academic writing at ELCY, Saudi Arabia	SU analysis Qualitative analysis Use of software for Quantitative analysis (SPSS - mean, standard deviation; median; interquartile range; correlations;)	To segregate the text into measureable chunks/rhetorical structure/stages/moves To check frequency of cohesive devices in rhetorical structure To find out statistically significant associations between the data variables To analyze the role of cohesion in the rhetorical structure
RQ 3	Student structured questionnaire (n=60) Teacher structured questionnaire (n=112) Teacher interviews (n=30)	Students of academic writing at ELCY, Saudi Arabia Teachers of writing in KSA & Arab EFL context	Use of SPSS to conduct descriptive analysis (mean, standard deviation; median; interquartile range); reliability analysis/ Cronbach Alpha data normality assumptions; correlations; variance analysis)	To measure and explain students' and teachers' perceptions about teaching & learning of academic writing & cohesion in Arab EFL context To find out statistically significant associations between the data variables To find out statistically significant comparisons between the teachers and students' perceptions

4.4.9.1. Research question 1

Data analysis for Research Question 1 (How does inter-sentence cohesion as a non-structural resource contribute to the creation of texture in the argumentative essays by Saudi EFL undergraduate students?) was primarily based on the model presented by Halliday and Hasan (1976). The notion of texture was operationalized keeping in view that cohesion as a

non-structural resource is one key component of it alongside the structural resources such as intra-sentence structure, macrostructure of discourse structure (Halliday and Hasan, 1976). The study did not include intra-sentence structure and the macro-structure of discourse for analysis of texture. Hence, for the sake of this study, role of cohesion in creation of texture was defined as the presence of the appropriately used cohesive devices that established cohesive relationships between or among different sentences of the sample essays through lexical, grammatical, and semantic resources. In addition, I converted the exam scores to obtain relative measure for cohesion grades (5.7.7.2). More specifically, I was interested in finding out how Exam and cohesion scores were related to the text length and cohesive density of the sample texts. I developed a scale for both the text length (5.6.2) and cohesive density (5.7.7.7) which I used for analysis of the Exam and cohesion scores on SPSS. These scores were then analyzed to find out statistically significant correlations and comparisons between cohesive devices and students' relative score for cohesion in regard to the corpus, text length, and cohesive density.

Cohesion in discourse manifests itself by relatedness of form, reference, and semantic connection which is illustrated in the table (T7-RM) below (Halliday and Hasan, 1976 p.304):

T7-RM: Nature of cohesive relations

Nature of cohesive relation	Type of cohesion
Relatedness of form	Substitution and ellipsis; lexical collocation
Relatedness of reference	Reference; lexical reiteration
Semantic connection	Conjunction

Although cohesion is realized either through lexicogrammatical or semantic relations, "the EXPRESSION of cohesive relations involves both the semantic and the lexicogrammatical systems in all cases: that is, both choices in meaning, and their realization in words and structures" (Halliday and Hasan, 1976 p. 323).

T8-RM: Representation of cohesion in the linguistic system

Representation in linguistic system	Semantic	Lexicogrammatical (typically)
Type of cohesive relation		
Conjunction	Additive, adversative, causal and temporal relations; external and internal	Discourse adjuncts: adverbial groups, prepositional groups
Reference	Identification: By speech role By proximity By specificity (only) Reference point	Personals Demonstratives Definite article Comparatives
Lexical cohesion	Collocation (similarity of lexical environment) Reiteration (identity of lexical reference)	Same or associated lexical item Same lexical item; synonym; superordinate; general word
Substitution	Identity of potential reference (class meaning) in context of non-identity of actual (instantial) reference	Verbal, nominal or clausal substitute Verbal, nominal or clausal ellipsis

Halliday and Hasan (1976) suggest that cohesive devices appear to be critical in determining the clarity, appropriateness, and comprehensibility in writing. In other words, they play significant role in the creation of texture which is crucial to the existence of a piece of writing as a text.

In order to measure the role of cohesion in creating texture in argumentative essays of Saudi undergraduate students, I used measures of accuracy of cohesive ties which focused on ties that were complete (i.e., the referent was found within the text) or ambiguous (i.e., the referent must be inferred or was unclear (Cox et al., 1990; McCutchen and Perfetti, 1982). Following Halliday and Hasan (1976) and Tanskanen (2006, p. 84), Sentence unit (SU) analysis was used for the purpose of developing an index of appropriate and inappropriate or ambiguous cohesive ties. Consistent with Halliday and Hasan's (1976) SU analysis, I developed a template (Appendix 6). To determine the types of cohesive relations present in students' argumentative writing, each SU within the texts was coded using Halliday and Hasan's (1976) coding scheme to determine instances of the following factors: (1) type of cohesive relations - reference (pronominal, demonstrative, comparative), substitution and

ellipsis (nominal, verbal, clausal), conjunction (additive, adversative, causal, temporal), and lexical cohesion - reiteration (repetition, synonym/near synonym, superordinate, general word) and collocation; (2) number of ties per S-unit; (3) cohesive items within the text; and (4) the presupposed item.

Next, the texts were examined for appropriate, inappropriate use and overuse of cohesive devices. Appropriate devices were identified as clearly establishing a cohesive relationship with the presupposed item to the extent that recovery of meaning was not challenging. Inappropriate items were identified as either ambiguous for which meaning was difficult to retrieve (Cox et al.1991) or too distant to be retrieved easily or grammatically inaccurate to distort meaning relationship between the referring and the referent or existed only in the situation of composition or the writer's own private knowledge rather than being stated explicitly in the text. Following Gilquin, et al. (2007, p. 322), I operationalized the overuse of cohesive devices to be those instance of the more than three times repeated use of the same item for which an alternative linguistic item could be used.

Descriptive statistics on SPSS was run to obtain sum, mean, standard deviation, median, and interquartile range scores for the main categories and their subcategories. Similarly, percentage scores were also obtained to further explain the behaviour of cohesive devices in the sample texts. In addition, correlation and variance analysis were conducted to find out significant associations and comparisons between the variables of the corpus, cohesion categories, appropriate and inappropriate cohesion devices, overused cohesion devices, and cohesion devices, Exam and cohesion scores. The results were then used to ascertain the role of cohesion in creating texture.

4.4.9.2. Research question 2

For research question 2 (How does cohesion function in the rhetorical structure of these argumentative essays?) the researcher applied Hyland's (1990) framework to find out the use of cohesion devices in the rhetorical structure of argumentative essays. The framework was chosen primarily because it was originally developed for argumentative writing in academic contexts and, therefore, suited more appropriately to the present analysis as compared with other models of argumentation such as that of Toulmin (1958; 2003) which is focused more

on logic than on purely academic considerations. The table (T9-RM) below illustrates the model where the bracketed moves are optional while the remaining are obligatory.

T9-RM: Hyland (1990 p.69) framework for argumentation

	Stage		Move	Detail
1.	Thesis (Introduces the proposition to be argued)	1	(Gambit)	Attention grabber - controversial statement or dramatic illustration
		2	(Information)	Presents background information for topic contextualization
		3	Proposition	Thesis statement
		4	(Evaluation)	Positive gloss - brief support of proposition
		5	(Marker)	Introduces and/or identifies a list
2.	Argument Discusses ground for thesis (Four move argument sequence can be repeated indefinitely)	1	(Marker)	Signals the introduction of a claim and relates it to the text
		2	(Restatement)	Rephrasing or repetition of proposition
		3	Claim	States reasons for acceptance of the proposition. Typically based on: strength of perceived shared assumptions a generalization based on data or evidence force of conviction
		4	Support	States the grounds which underpin the claim. Typically: Explicating assumptions used to make claim Providing data or citing references
3.	Conclusion Synthesizes discussion and affirms the validity of the thesis	1	(Marker)	Signals conclusion boundary
		2	Consolidation	Presents the significance of the argument stage to the proposition
		3	(Affirmation)	Restates proposition
		4	(Close)	Widens context or perspective of proposition

The subjects of the present research were taught the argumentative essay from a course book on academic writing by Oshima and Hogue (2006). Table T10-RM presents the model of argumentative essay prescribed in the book.

T10-RM: Oshima and Hogue's (2006 p.143) model of argumentative essay

Block Pattern	Point-by-Point Pattern
I. Introduction Explanation of the issue Thesis statement	I. Introduction Explanation of the issue, including a summary of the other side's arguments Thesis statement
II. Body Block 1 A. Summary of the other side's arguments B. Rebuttal to the first argument C. Rebuttal to the second argument D. Rebuttal to the third argument Block 2 E. Your first argument F. Your second argument G. Your third argument	II. Body A. Statement of the other side's first argument and rebuttal with your own counterargument B. Statement of the other side's second argument and rebuttal with your own counterargument C. Statement of the other side's third argument and rebuttal with your own counterargument
III. Conclusion May include a summary of your point of view	III. Conclusion May include a summary of your point of view

Oshima and Hogue prescribe a typically pedagogic structure for both the Block and the Point-by-Point Patterns i.e. Introduction - Body - Conclusion. These correspond with Hyland's three stages of Thesis - Argument - Conclusion. Hyland's is segregated into obligatory and optional moves which are more distinct and clear than Oshima and Hogue's. For instance, both consider the Thesis statement an essential part of the Introduction. While Hyland proposes two optional moves Gambit and Information, Oshima and Hogue call them "attention-getting introduction" (p.147) for Gambit, and "explain the issue" (p.147) for Information. The body of the argumentative essay which Hyland calls the Argument is built on four moves Marker, Restatement, Claim, and Argument with the last two being the obligatory. Oshima and Hogue, on the other hand, adopt Toulmin's (1953) terms of argument, counterargument and rebuttal. They propose three opposing arguments followed by rebuttals before the writer's argument. Hyland's is comparatively more flexible since it allows indefinite repetition of claims and the following support which can be counter argument, rebuttal or counter rebuttal. Nevertheless, both Hyland and Oshima and Hogue's models are related to each other at least in their provision

for the thesis, the claims and their support which are essential elements of an argumentative essay. The Conclusion stage for Oshima and Hogue is summary of the writer's point of view while for Hyland it "synthesizes discussion and affirms the validity of the thesis" as well as is prospective since it "widens context or perspective of proposition" (p.69).

Despite some visible differences in the move structure and terminology, both Hyland's and Oshima and Hogue's models are implicitly related to each other in their basic structure: Thesis statement, and claim and support for the thesis/proposition. The students of the study were taught the argumentative essay based on Oshima and Hogue's model, and were not familiarized with Hyland's move analysis. So, it will not be surprising if they do not make robust use of the Hyland's model which I planned to apply for analysis of students' argumentative writing.

This framework has a three-stage structure with thirteen moves in the overall structure. For analysis, the researcher created a template (Appendix 6) to identify the SU in the respective stage and move; the cohesive devices in each stage and move, and the presupposed item in each stage and move to account for the cohesive relationship between the referent and the referring. Cohesive devices evident in these rhetorical components were manually counted to be used on SPSS for descriptive statistics and the sum, mean, standard deviation, median, and in quartile range scores for each category and subcategory of cohesive devices. In addition, non-parametric correlation analysis was conducted to identify statistically significant associations between the moves of the rhetorical structure in regard to Halliday and Hasan's (1976) 18 cohesion categories, and between the individual cohesion categories and the 13 move rhetorical structure. The results of these analyses helped the researcher to explain more prominent cohesive devices in relation to their function in the rhetorical structure of the argumentative essays.

4.4.9.3. Research question 3

Teachers' perceptions as elicited from the structured items of the questionnaire (Appendix 12) and interviews (Appendix 19), and students' perceptions obtained through structured questionnaire (Appendix 13) formed the data for Research Question 3 (What are teachers and students' perceptions about teaching and learning of academic writing and cohesion in Arab EFL context?). Both the questionnaires had 50 similar items which were responded by 112 teachers and 60 students. Teachers' questionnaire was completed by EFL teachers in the

Arab world via the online tool "surveymonkey", while students' was done manually at the research site i.e. ELCY, Yanbu Colleges & Institutes, Saudi Arabia. After the questionnaires were collected, I categorized them into six factors according to the emerging themes. SPSS was used for descriptive analysis for frequency, percentage, mean, standard deviation, median, and interquartile range scores. The data was also subjected to correlate the factors and their individual items on each questionnaire. Nonparametric variance analysis was done to compare the perceptions of the teachers and the students.

As for the teacher interviews (Appendix 19) which were based on three open-ended questions, I, first, transcribed the audio-recorded interview. Each transcript was read several times to identify prominent themes/sub-themes as they emerged out of the transcript in regard to the topic. These sub-themes for each of the three questions were colour coded and identified as belonging to one main theme as shown in the table T11-RM, T12-RM, and T13-RM below. Next, percentage scores were tabulated to explain the major trends evident in teachers' beliefs. Following this procedure, I was able to find out answers to the three interview questions as well as collate these results with research question 1 and 2 wherever relevant.

T11-RM: Thematic colour-coding for interview question 1

	Use of CDs (U) Deficient (U1) Conditional (U2)	Strengths (S) Grammatical accuracy (S1) Lexical range (S2) Paragraph organization (S3) Cohesive devices (S4) Curriculum matters (S5) Functional use (S6) Arabic Culture (S7) Cognition (S8) Language proficiency (S9)	Weaknesses (W) Grammatical accuracy (W1) Lexical range (W2) Paragraph organization (W3) Cohesive devices (W4) Curriculum matters (W5) Functional use (W6) Arabic Culture (W7) Cognition (W8) Language proficiency (W9)
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T12-RM: Thematic colour-coding for interview question 2

	Familiarity with RS (F) Familiar (F1) Not familiar (F2)	Use of CDs in RS (URS) Grammatical cohesion (URS 1) Lexical cohesion (URS 2) Over/underuse (URS 3) Contextual factors (URS 4)	Academic Functions (AF) Oracy (AF 1) Introduction (AF 2) Thesis/topic statement (AF 3) Supporting detail (AF 4) Conclusion (AF 5) Students inability (AF 6) Unsure (AF 7)
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T13-RM: Thematic colour-coding for interview question 3

	Pedagogy (PDG) Reading (PDG 1) Practice (PDG 2) Pedagogy (PDG 3) Lexical base (PDG 4) Syllabus design (PDG 5) Contextual factors (PDG 6)
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4.4.10. Concerns over reliability and validity

I took care that issues in regard to reliability, validity, and ethics were duly looked after. The subsections below discuss how these issues were dealt with.

4.4.10.1. Reliability

"Reliability is the degree to which a test consistently measures whatever it measures", (Gay, 1997 p.145). It is expressed numerically, usually as a coefficient; a high coefficient indicates high reliability" (ibid). In simple terms, research results have high reliability if they can be replicated in other contexts. As for as the present study is concerned, caution was taken to adhere to the established research procedures in terms of item construction, implementation, data collection, and analysis. But since the study was conducted in a certain teaching context for collection of writing samples, the results might not be as highly generalizable to other contexts as they would be to a similar Arab EFL context because of the social, cultural, and pedagogic factors that affect students' writing proficiency and performance. Similarly, there could be variations in perceptions of the teachers and the students who are outside the Arab

EFL context. However, the researcher conducted a reliability test (Cronbach's Alpha) (Appendix 7) to ascertain consistency of the data being used both for text analysis and the structured questionnaires. The analysis of both the qualitative and the quantitative data are presented in Chapter 5.

4.4.10.2. Validity

Validity is one of the cornerstones of reliable research and refers to "the degree to which evidence and theory support the interpretation of test scores entailed by proposed uses of test" (Joint Commission on Standards for Educational and Psychological Testing, 1999 in Best & Kahn, 2003 p. 296). Seliger and Shohamy (1989, p.95) suggest that "any research can be affected by different kinds of factors which, while extraneous to the concerns of the research, can invalidate the findings". This refers to internal and external validity which if not ensured can question not only the design and methods adopted for the study but also the results of the study. Following Best and Kahn (2003 p.297) that a typical valid research must provide validity evidence based on "three broad sources: content, relations to other variables, and construct", I took care that my research study fulfills conditions for these. The study was conducted in an English Language Institute which was accredited by Commission for English Language Program Accreditation (CEA) for its course designs. The student participants shared commonalities in terms of the social, cultural, and linguistic background, English language preparation, and learning objectives (4.4.4). The teacher participants were all qualified and trained EFL teachers who had considerable experience of teaching in the Arab EFL settings (4.4.4).

The mainstay of validity is to justify the extent of data interpretation. First, I operationalized the key concepts and constructs in regard to the participants and the data before finalizing the research design (Bachman and Palmer, 1996). For evidence of test content, I chose data from student writing which had been produced in an examination setting. Before the examination, the students had received formal instruction in writing argumentative essays. The data was carefully chosen following a set criteria (4.4.6). Validity evidence in relation to other variables was based on what are referred to as predicative validity and concurrent validity. The data based on samples of students' writing, the questionnaires, and teachers'

interviews were used to make predictions about how cohesion manifested itself in academic writing as well as in relationships with other variables and measures. Validity evidence in regard to internal structure also known as construct validity is about the extent to which test item/s and test structure can be "accounted for by the explanatory constructs of a sound theory" (Best & Kahn, 2003 p.298). My construct of cohesion was modeled after the SFL theory, and more specifically after Halliday and Hasan (1976). Similarly, the construct of rhetorical structure was generated from the genre theory, especially Hyland (1990). The questionnaires were designed based on the review of literature of the study which overviewed multiple perspectives on the subject, and the Likert Scale was used for measurement of the perceptions of both the teachers and the students. Following Bachman (2004) that both qualitative evidence in the form of interviews and observations, and the quantitative evidence collected from text and questionnaire analysis, correlation analysis, and comparison of means and variance between and among groups, I assumed that my study fulfilled most benchmarks required for the research validity.

4.4.11. Ethical issues

A rigorous adherence to ethical standards is central to the research process. Research ethics, according to Gravetter and Forzano (2003 p.99), "concern the responsibility of researchers to be honest and respectful to all individuals who may be affected by their results or their reports of the studies' results. Researchers are usually governed by a set of ethical guidelines that assist them to make proper decisions and choose proper actions". The most crucial ethical concerns in social sciences or behavioural research are voluntary participation of the subjects, information about potential risks, confidentiality, anonymity, and storage and disposal of data (Berg, 2004). In compliance with the Data Protection Acts (DPA) of 1998 and 2018, I took special care to adopt suitable measures to ensure that ethical considerations in terms of fairness and participant safety (Brown, 2004; Strydom, 2002), accessibility, confidentiality, and anonymity (Berg, 2004), and storage and disposal of data (Berg, 2004; Dorneyi, 2007) were duly met. These included obtaining informed consent of participation by the subjects, informed consent by the participants for use of data collected from their responses, sharing relevant information about the aims of the study with the participants (Appendix 4), getting formal approval for collection of examination essays from the

Programme/Course Coordinator of the English Language Center, Yanbu (Appendix 3), and getting ethical approval from Faculty Research Ethics Committee Faculty of Health & Life Sciences De Montfort University, UK (Appendix 2).

"How data are stored and retrieved is the heart of data management " (Huberman and Miles, 1994 in Berg, 2004 p.53). This entails that data storage is initiated after the conditions of accessibility, confidentiality and anonymity are met by the researcher. I took careful measures for the accessibility, confidentiality, anonymity, safe storage and disposal of the collected data. These included, as mentioned above, access to the data base such as the exam scripts and the participants such as the teachers and the students through proper channels by obtaining formal permissions from the concerned authorities and informed consent from the participants (Appendix 2,3,4). In order to ensure confidentiality and anonymity, I took caution to remove or not to include any "elements that might indicate the subjects' identities" (Berg, 2004 p.53). I used cryptogram for all personal identifiers and responses once the informed consent was obtained from the subjects. However, data associating cryptogram with specific subject identity was carefully saved in a separate file accessible only to the researcher. Participant responses were reported in summary form or using generic expression "*one of the participants/respondents*" where quoting directly to ensure confidentiality and anonymity. The qualitative data including students' essays (Appendix 6) and transcripts of teachers' interviews (Appendix 19) were, therefore, assigned a code number instead of the participants' identity for later analytical purposes. Similarly, survey questionnaires (Appendix 12, 13) did not include any item that could elicit personal information from the participants.

The ethical considerations underpinning the storage of data warn against some potential threats that may cause loss, tampering with, or even theft of the data. A serious threat to data storage may come after the study is complete. For instance, the researcher or the data controlling office may lose copies of the printed data or the audio/video taped material with the data falling in "unauthorized hands" (Dorneyi, 2007 p.68). For this study, data storage was my sole responsibility as there was no collaboration of any sort. Hence, the entire data was collected personally, and kept in personal custody. The soft data such as the typed versions of the students' essays, interview tapes and transcripts, questionnaire responses

from the teachers thus collected were kept safe in a password protected files (both main and the backup). The hard copies such as the original writing scripts and manually completed students' questionnaires were kept in a locker in the researchers' personal custody. Quite importantly, my research did not include study of any sensitive material (e.g. human tissue) which might pose a serious threat to the subjects' participation or the samples of the data. However, in order to fulfill ethical benchmarks in regard to disposal of the data, I had to devise a concrete strategy. Hence, following (Dorneyi, 2007 p.68) that "the best way to prevent the abuse of data storage is to destroy the data after a while", I proposed to take cautious measures to dispose of the data safely once the study was completed.

4.5. Piloting of data analysis

The data was piloted before being subjected to fully fledged analysis though not reported in this thesis. Five samples from students' essays and 10 from structured questionnaires and interview were taken for analysis on the same methods that had been designed for the main study. The main purpose was to ensure effectiveness of the analysis tools and procedures and thereby, remove any weaknesses that was identified.

4.6. Chapter summary

This chapter details research methods adopted for data analysis. The first section provides rationale for the choice of mixed-methods for this study followed by theoretical background to the quantitative and qualitative research paradigms. The later part of the chapter gives details about the research design especially the data analysis procedures for the main questions of the study. The final section of the chapter presents a short discussion on matters related to reliability, validity and ethics.

Chapter 5: Results of data analysis

5.0. The pilot analysis

A preliminary analysis before the main study was designed to pilot the data. The basic aim was to fix any issues that might arise with data analysis procedures including the results. The pilot section of the study was designed to include $n=5$ of the students' argumentative essays produced during the Mid and Final Term examination at the English Language Center at Yanbu Colleges and Institutes, Saudi Arabia. In addition, $n=10$ each of the two structured questionnaires which measured the perceptions of the teachers and the students was included. Lastly, $n=5$ of the teacher interviews was audio-recorded, transcribed and used for analysis. The students' texts were used to find out answers to research question 1 and 2 of the study while, the questionnaires and teacher interviews were primarily used to answer research question 3. This chapter presents results of the data analysis only for the main study. The results are presented in the order of research questions.

5.1. The main study

The main study followed some major deviations from the pilot analysis. First, the data was checked for normality which was not done in the pilot study owing to a very small sample size. The data normality results dictated the choice of non-parametric tests. Hence, the median and the interquartile range scores were added to the descriptive statistics results and used in conjunction with the mean and standard deviation scores. Non-parametric correlations (Kendal's tau_b and Spearman's rho) and variance analysis (Kruskal Wallis and Mann Whitney U) were also included to find out the strength and direction of associations between the variables as well as differences in the main groups and their sub-groups. These helped me to make correlations and comparisons between the different variables of the corpus, between the categories of cohesion and writing scores for the Research Question 1, and between the perceptions of the teachers and the students for the Research Question 3. These were missing in the pilot analysis. Moreover, the percentage scores for individual appropriate and inappropriate categories of CDs were taken from the overall 1954 use of CDs in the corpus rather than from the percentage of individual category. This approach was, in fact, adopted to see the occurrence of CDs in the corpus in a holistic way and to obtain a clear picture of the role of CDs in creating texture in students' argumentative essays. In addition, results for the overused CDs in the text comprising of Reference,

Conjunction, and Lexical cohesion were taken and presented to further ascertain the role of cohesion in creating texture. A reliability test was also conducted to test the reliability of the data which had not been done for the pilot study owing to the smallness of the size of the data.

5.2. Descriptive statistics and statistical tests used in the study

The sub-sections below detail the descriptive statistics and the nonparametric statistical tests used for obtaining and reporting the results of the study as well as provide rationale for their choice.

5.2.1. Mean for central tendency

The mean (M) is commonly referred to as the arithmetic average. Being an interval or ratio statistic, mean is "generally a more precise measure than the median and the mode, and the best indicator of the combined performance of the entire group" (Ary et al. 1979 p.103). I reported the mean values for all results for the three research questions of the study so that normally distributed data was appropriately distributed, and also the reporting of the results was consistent with non-normally distributed data where the measure of central tendency used was the median.

5.2.2. Standard deviation for central deviation

Standard deviation (SD) is the "square root of the variance and measures the standard distance from the mean" (Gravettor & Forzano, 2003 p.431), and is, therefore, always reported alongside the mean. SD is calculated according to the size of individual scores in the distribution. A small SD indicates that "scores are close together and a large SD indicates that the scores are more spread out" (Gay, 2005 p.437). I reported the SD scores with the M scores for the whole data set for the three research questions of the study including the non-normally distributed.

5.2.3. Median for central tendency

The point in a distribution below which 50% of the cases are found is called the Median (Mdn). It is an ordinal statistic as it is based on ranks. Median is usually reported for non-normally distributed data instead of the mean. Since part of my data was non-normally

distributed, I included the median values also as it "takes into account the size of each score results in either overestimation or underestimation of the typical score" (Ary et al. 1979 p.102). However, I extended reporting the median scores to the normally distributed data also in order to remain consistent.

5.2.4. Interquartile range for central deviation

A range which holds 50% of the scores is the interquartile range (IQR). There are three quartile scores: Q1 which means 25% scores are below this level; Q3 has 75% scores lower than this level. The level with 50% scores below and above the level is, in fact, the median. A small IQR indicates the scores are close together while the large IQR suggests that the scores are more spread out (Gay, 2005 p.436). IQR is a more stable measure of variability than the range and is appropriate whenever the median is appropriate (ibid).

5.2.5. Cronbach's alpha for reliability analysis

Cronbach's alpha (α) - a measure of the internal consistency of a test or scale - is used for the reliability analysis, and is reported as a number between 0 and 1. An alpha value of above .60 is considered acceptable for analysis (Sekaran, 2006). The alpha results indicate the consistency with which the test items measure the same concept or construct. Researchers recommend reliability analysis of the data before other statistical tests are used in order to ensure validity (Tavakol and Dennick, 2011). I conducted the reliability analysis through Cronbach's alpha in order to measure the internal consistency of the data for the text analysis (Research Question 1 & 2), and the survey questionnaires (Research Question 3).

5.2.6. Shapiro-Wilk for data normality check

Researchers recommend checking for normality of the data distribution before choosing appropriate statistical tests which follow certain assumptions of normality. The Shapiro-Wilk test is one of the most common tests applied to check the normal distribution of the research variables especially for a smaller sample size "because of its good power properties as compared to a wide range of alternative tests" (Öztuna, et al. 2006 p.171). Keeping in view the small sample size of my data (n=30) and results of the descriptive statistics which manifested variation in the text length, number of sentences, cohesive devices, and Exam

scores, I decided to apply the Shapiro-Wilk test, which is recommended for a sample size of $n > 3$ and $n < 2000$, to get an estimate of the normal distribution of the variables in my research i.e. Words per text (WPT), Sentence Units per text (SUPT), Cohesive Devices per text (CDPT), and Exam and relative scores for cohesion (CDS) for each student. I also used this test to confirm the normality assumptions of the two structured questionnaires that I had designed to measure the perceptions of the teachers and the students for the Research Question 3.

5.2.7. Kendal's tau_b and Spearman's rho for correlation analysis

Correlation is the relationship between two or more paired variables or two or more sets of data, and varies between the range of +1 and -1. Perfect positive or negative relationship indicates that for every unit increase or decrease in one variable there is a proportional unit increase or decrease in the other (Best and Kahn, 2003). The correlation results report the direction of the relationship which is indicated by the sign of the coefficient as well as the strength of the association which is represented by the numerical value. Both Kendal's tau_b and Spearman rho are non-parametric coefficients for identifying associations between two or more variables, and are "closely related; they are both functions of the ranks" (Taylor, 1987 p.409). Kendal's tau (r_t) represents the degree of concordance between two sets of ranked data. It has a simpler interpretation of the population parameter. Spearman rho, on the other hand, gives a more accurate estimate of the population parameter. In most of the cases, however, the results of Kendall's tau and Spearman's rho are approximately similar and, therefore, may direct to similar interpretations (Seigel & Castellan, 1988).

Since the sample size for the text analysis was small ($n = 30$), I decided to use Kendal's tau_b for correlation analysis of Research Question 1 and 2, and the Spearman's rho (r_s) which is more appropriate for a larger sample size ($n > 30$) for teachers and students' perceptions (Research Question 3) with the sample size of $n = 112$ and $n = 60$ respectively. I chose to use Evans' (1996) guide for reporting the effect size of the correlation results: .00 - .19 "very weak"; .20 - .39 "weak"; .40 - .59 "moderate"; .60 - .79 "strong"; and .80 - 1.0 "very strong".

5.2.8. Kruskal Wallis and Mann Whitney U for nonparametric variance analysis

Kruskal Wallis and Mann Whitney U are the two most commonly used tests for analysis of variance when the data does not satisfy assumptions of normality. Kruskal Wallis is considered a non-parametric equivalent to ANOVA while the Mann Whitney U is to the Independent Sample t-test. The Kruskal-Wallis tests if the population medians on a dependent variable are the same across all levels of a factor. In case of only two groups, no further significance tests are required as post hocs. With three or more groups, follow-up post hoc tests such as the Mann Whitney U are run to compare differences between pairs of group medians (Green & Salikand, 2008). The Mann-Whitney U (also known as the Wilcoxon's rank-sum test) tests the null hypothesis that “the two samples were drawn at random from identical populations (not just populations with the same mean)” (Howell, 2010, p. 673), so that rejection of the null hypothesis is “generally interpreted to mean that the two distributions had different central tendencies, but it is possible that rejection actually resulted from some other difference between the populations” (ibid). The Mann Whitney U is computed in the following way:

“The statistic for testing the hypothesis that the two distributions are equal is the sum of the ranks for each of the two groups. If the groups have the same distribution, their sample distribution of ranks should be similar. If one of the two groups has more than its share of small or large ranks, there is reason to suspect that the two underlying distributions are different.” (Norusis, 1993 p.378).

Effect size for the non-parametric test results is as important as that for the parametric (Grissom and Kim, 2012). Following Green & Salikand (2008), for the Kruskal Wallis it was calculated as $r = \sqrt{\chi^2 / n - 1}$ (r is the effect size, χ^2 is the chi square, and n is the number of observations), and for the Mann Whitney U

$$r = \frac{Z}{\sqrt{n}}$$

I used the Kruskal Wallis for the text analysis in regard to Research Question 1, and the structured questionnaires for Research Question 3. I didn't apply this to the Research Question 2 since the argumentative essay was analyzed on three-stage and 13 move rhetorical structure with clearly anticipated variation in the stage and move length. For

instance, Argument stage and the Support moves in it were, as a rule, the largest parts of the essay in terms of text length and, thereby the CDs.

Nevertheless, as post hoc intervention to see the differences between the groups for Research Question 1 and 3, I applied Mann Whitney U. Since my sample size was $n = 30$, I used the exact method, and exact significance values were reported. However, only statistically significant results were reported as was the effect size.

5.3. Reliability test for the corpus

A reliability test was conducted on SPSS to measure the internal consistency of the data collected for the corpus of the main study. The three variables of the corpus: Words per Text (WPT) , Sentence Units per Text (SUPT), and Cohesive Devices per Text (CDPT) were set to a five-point scale for the reliability analysis. The Cronbach's Alpha thus obtained (Appendix 7) was ($\alpha = .799$) which indicated that the data for the study was sufficiently reliable to be used for analysis (Sekaran, 2006 p.311).

5.4. Normality test for the data

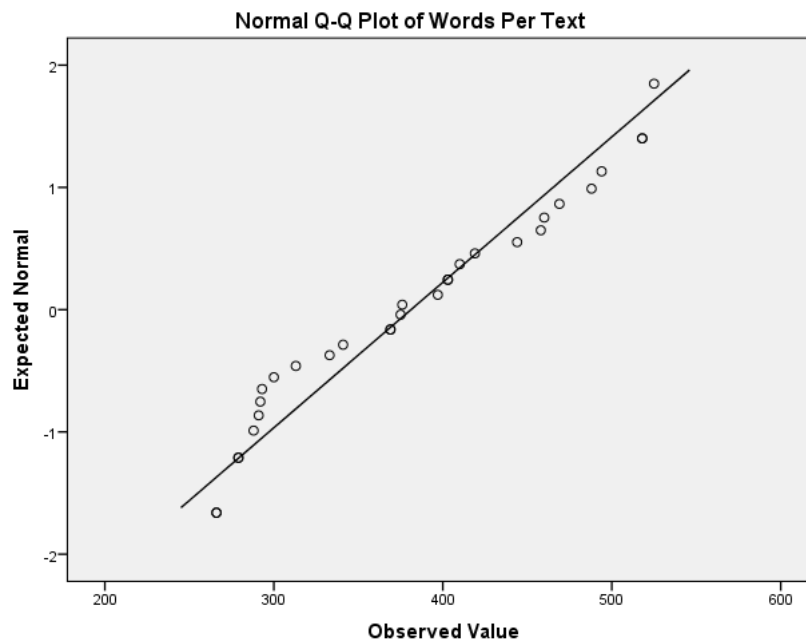
The data for Research Question 1 and 2 were tested for normal distribution so that appropriate statistical tests could be used. A Shapiro-Wilk test ($p > .05$) (Shapiro & Wilk, 1965; Hanusz & Tarasińska, 2015), and the visual display of the QQ-Plots revealed that WPT with a skewness of .221 ($SE = .427$) and a kurtosis of -1.231 ($SE = .833$) and Exam Scores (CDS) with a skewness of -.158 ($SE = .427$) and a kurtosis of -1.290 ($SE = .833$) were not normally distributed. On the other hand, SUPT with a skewness of .472 ($SE = .427$) and a kurtosis of -.137 ($SE = .833$), and CDPT with a skewness of .236 ($SE = .427$) and a kurtosis of -.914 ($SE = .833$) were approximately normally distributed.

T1-MS: Normality test results for the corpus

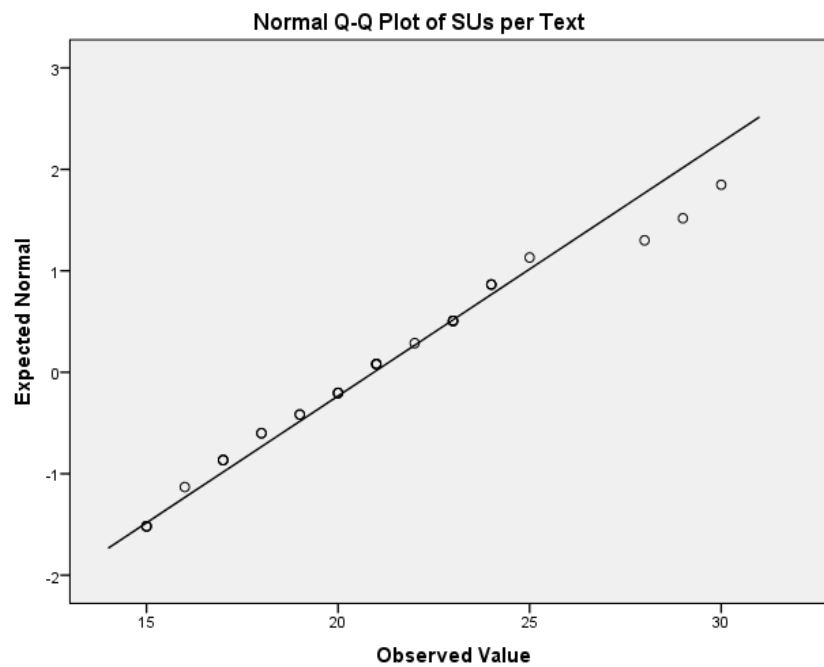
	Tests of normality				
	Skewness (SE)	Kurtosis (SE)	Shapiro-Wilk		
			Statistics	df	Sig.
WPT	.221 (.427)	-1.231 (.833)	.929	30	.045
SUPT	.472 (.427)	-.137 (.833)	.957	30	.256
CDPT	.236 (.427)	-.914 (.833)	.955	30	.226

Exam scores	-.282 (.427)	-1.203 (.833)	.888	30	.004
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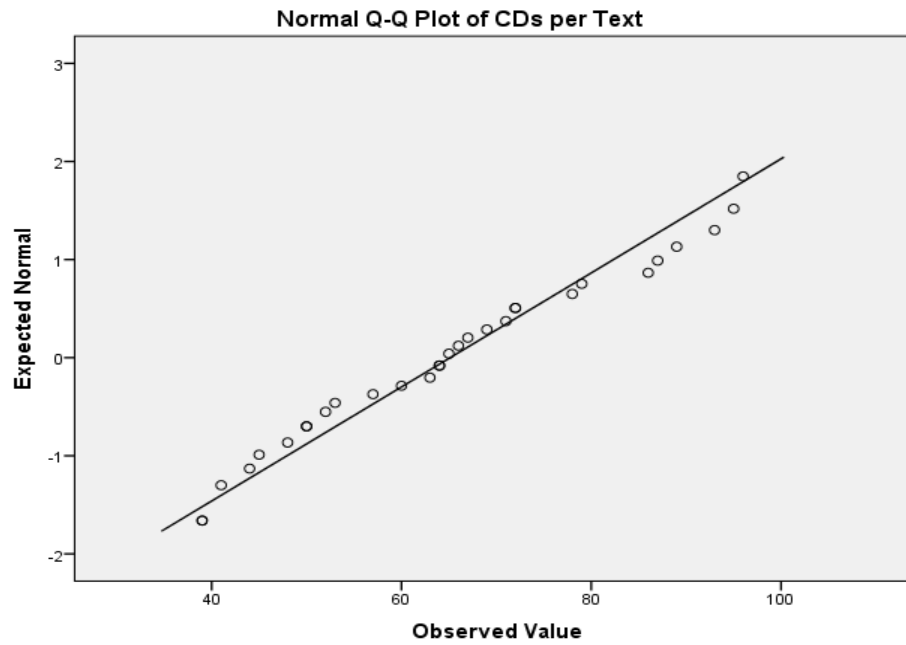
C1-MS: QQ-Plot for WPT



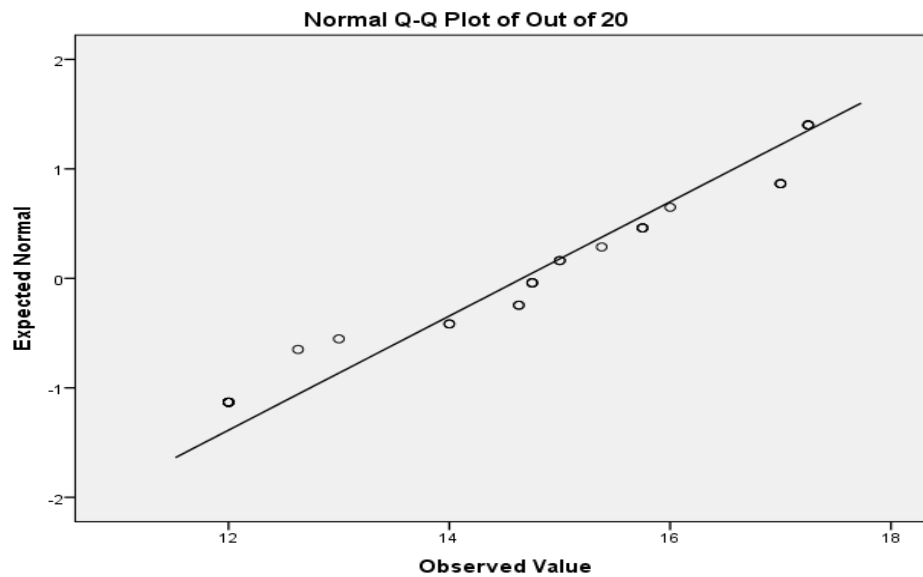
C2-MS: QQ-Plot for SUPT



C3-MS: QQ-Plots for CDPT



C4-MS: QQ-Plot for Exam Scores



5.5. Dealing with non-normal distributions in the data

A non-normal data distribution can be dealt with in two ways: One is the transformation of the data via some mathematical functions as are available in software programmes like the SPSS. This approach, however, can result in changes in hypothesis or deviations from the original construct being studied (Grayson, 2004). Field (2009, p.156) observes that "using a log transformation and comparing means you change from comparing arithmetic means to comparing geometric means". The second approach to dealing with non-normally distributed data is to use non-parametric tests (Pallant, 2013). Based on the results of the normality test, and following Dorneyi (2007 p.227) that "if we have less precise, ordinal data, or categorical (i.e. nominal) data or if the data is not normally distributed, parametric tests are not appropriate". Since the data for my study was both normally and non-normally distributed, I could use parametric for normally distributed variables and non-parametric for non-normally distributed ones. But this would have caused issues especially in making and relating correlations and comparisons. Therefore, following van der Helm-van Mil et. al. (2008) that when some variables on the data set have normal distribution and some non-normal, non-parametric tests can be used, I used non-parametric tests such as the Kendall's Tau_b and the Spearman rho for correlation analysis, and MannWhitney U and Kruskal Wallis for comparison between two or more sets of data. In addition, I included mean (M), standard deviation (SD) scores with the median (Mdn), and interquartile range (IQR) scores. Typically, Mdn and IQR are reported for reporting descriptive statistics for non-parametric tests. The reason for including the M and SD scores was that the data as reported in the normality test included both normal and normal distribution. For consistency and to accurately present the central tendency and dispersion especially that of the normally distributed variables, I decided to include the M and SD scores also.

5.6. The corpus characteristics for Research Question 1 and 2

Table: T2-TA-MS shows that the corpus for the main study comprised of 11436 words collected from n= 30 of the students' argumentative essays which they had written in their Mid and Final Term examination at the ELCY, Yanbu Colleges and Institutes, Saudi Arabia. In order to obtain descriptive statistics for the corpus, I segregated the sample texts in sentence units which were then manually analyzed for instances of cohesion use based on colour coding for each cohesion category. The cohesive devices were manually computed and stored in a template document for

both Research Question 1 and 2 (Appendix 6). These data were then transferred to excel sheet, and later to the SPSS for analysis. The mean, median, standard deviation, and interquartile range results were obtained from the SPSS software while the percentage scores for each cohesion category and its respective subcategory were computed manually.

These texts ($M = 381.20$; $SD = 84.076$; $Mdn = 375.50$; $IQR = 166$) revealed (Table T2-MS) that the number of words per texts was not very consistent across the collected data and there was considerable variation among the number of words used by individual student writers in their essays. A total of 628 Sentence Units (SUs) ($M = 20.93$; $SD = 3.999$; $Mdn = 21.00$; $IQR = 21.00$) was obtained in the 30 texts of the corpus. The results demonstrated that since there was not high variation in the number of SUs, there was the possibility that some students wrote a larger proportion of simple sentences as compared to those who used compound or complex sentence structures. In addition, 1954 Cohesive Devices (CDs) were identified ($M = 65.13$; $SD = 17.202$; $Mdn = 64.50$; $IQR = 28$) in these student texts. The results indicated that the students used CDs with considerable degree of variance in their essays. Finally, relative Exam Scores ($M = 14.65$; $SD = 1.917$; $Mdn = 14.75$; $IQR = 3.78$) were calculated which revealed visible departures from normality.

T2-MS: Descriptive statistics for the corpus

		WPT	SUPT	CDPT	Exam Scores
N	Valid	30	30	30	30
	Missing	0	0	0	0
Mean		381.20	20.93	65.13	14.65
Median		375.50	21.00	64.50	14.75
Std. Deviation		84.076	3.999	17.202	1.917
IQR		166	6	28	3.78

Chart C5-MS shows category distribution of CDs in the corpus. According to the results, the students felt most comfortable when using Lexical cohesion which was found to be 49.38% ($n=965$) of the overall use of CDs ($n= 1954$) in the sample texts. Next category on the list was Reference which students used on 712 instances in their writing i.e. 36.43% of the overall category use. Conjunctions ($n= 247$) were found 12.64% of the use while substitution and Ellipsis employed on 10 and 20 occasions in the texts were only 1.02% and .50% respectively.

C5-MS: Category Distribution of CDs in Students' Argumentative Writing

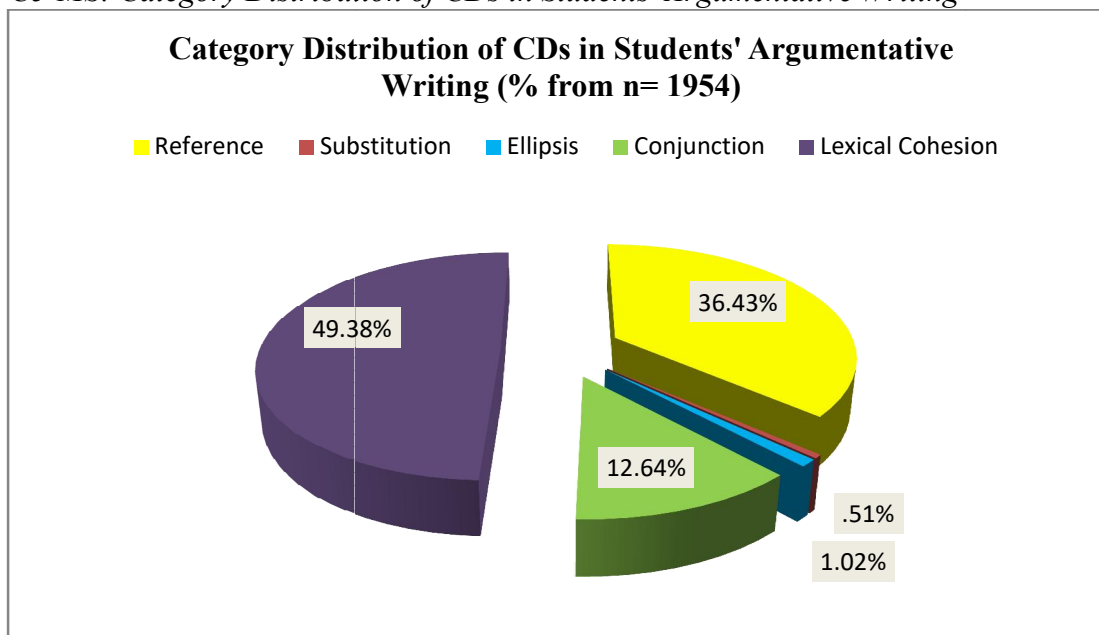
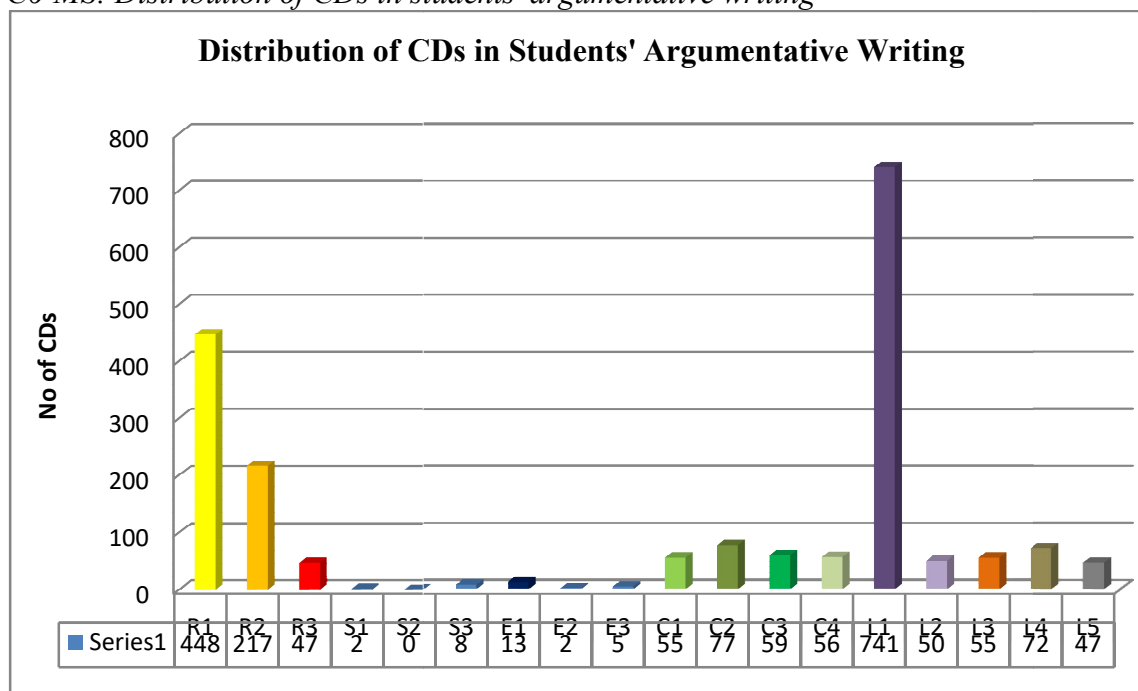


Chart C6-MS displays the distribution of each subcategory of CDs in students' argumentative writing. It is evident from the results that Referential and Lexical cohesion were the most frequently used CDs in these texts. Students mostly used R1(n= 448) which was 22.92% of the overall use of 1954 CDs. R2 (n= 217) and R3 (n= 47) were found to be 11.10% and 2.40% of the entire CD use in students' essays. Substitution and Ellipsis had an extremely rare presence in these texts, and seemingly did not play an important role in the functioning of cohesion in the essays. Quite interestingly, students used Conjunction as a CD with an almost equal frequency with C2 having a slightly higher number and percentage (n= 77, 3.94%) than other conjunctives. C1 (n = 55), C3 (n = 59) and C4 (n = 56) were used 2.81%, 3.01%, and 2.86% of the overall CD use i.e. n = 1954 respectively by the students. However, students' texts unveil that Lexical cohesion was the most preferred type of CD among the students, especially L1 (n = 741) which formed 37.92% of the aggregate use of CDs in students' texts. L2 (n=50), L3 (n= 55), L4 (n= 72) and L5 (n= 47) were not used as extensively as L1, and contributed 2.55%, 2.81%, 3.68%, and 2.40% of the overall CD use (n = 1954) respectively towards the cohesion of argumentative essays written by Saudi undergraduate students.

C6-MS: Distribution of CDs in students' argumentative writing



5.6.1. Non-parametric test for correlation among corpus variables

Data from WPT, SUPT, and CDPT were run on SPSS to find out statistically significant correlations between these variables. Kendall's Tau_b test revealed weak to moderate positive correlations between the three variables of the corpus. Based on the results, WPT showed weak positive correlation with SUPT $r_t = .386, p < 0.01$, and moderate positive correlation with CDPT $r_t = .585, p < 0.01$. SUPT was weakly and positively correlated with CDPT $r_t = .364, p < 0.01$. The results as shown in Table T3-MS indicated that there was weak positive linear increase in the number of sentences and moderate positive increase in cohesive devices in regard to the text length.

T3-MS- : Corpus correlations

			WPT	SUPT	CDPT
Kendall's tau_b	WPT	Correlation Coefficient	1.000	.386**	.585**
		Sig. (2-tailed)	.	.004	.000
		N	30	30	30
	SUPT	Correlation Coefficient	.386**	1.000	.364**
		Sig. (2-tailed)	.004	.	.006
		N	30	30	30
	CDPT	Correlation Coefficient	.585**	.364**	1.000
		Sig. (2-tailed)	.000	.006	.
		N	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Next, I used SPSS to compute Kendall's tau-b correlations of WPT and SUPT with the main categories of CDPT i.e. reference (R), substitution (S), ellipsis (E), conjunction (C) and lexical cohesion (L), and that of these categories with the overall CDPT (Appendix 9). The test results showed significant moderate positive correlation between WPT and R $r_t = .521$, $p < .01$, and L $r_t = .453$, $p < .01$. On the other hand, SUPT showed significant moderate positive correlation only with L $r_t = .426$, $p < .01$. There was strong positive significant relationship between CDPT and total referential devices (TR) $r_t = .649$, $p < .01$ and between CDPT and total lexical cohesion (TL) $r_t = .625$, $p < .01$. Among the correlations between CDPT categories, R was weakly but positively correlated with L $r_t = .306$, $p < .05$, S was also weakly but positively correlated with L $r_t = .337$, $p < .05$, E was weakly but positively correlated with R $r_t = .327$, $p < .05$, and weakly negatively correlated with C $r_t = -.381$, $p < .05$. The results showed that there was moderate increase in the use of R and L in relation with increase in the text length. However, increase in sentence length was indicative of the use of moderately higher number of lexical devices. Increase in the use of referential cohesion indicated moderate increase in the use of ellipsis and lexical cohesion. Importantly though, the results also revealed that an increase in the CDPT was marked by a high increase in total reference devices (TR) and total lexical devices (TL) as opposed to total conjunction devices (TC) which were widely dispersed over the corpus of CDPT.

5.6.2. Nonparametric variance analysis for the corpus

Next, I was interested in observing if the sentence units (SUPT) and the cohesive devices in the sample texts (CDPT) varied with the text length or not. In other words, I wanted to test

any statistically significant differences in the SUPT and CDPT in relation to the text length (WPT). First, I scaled the corpus into five groups in terms of the text length. The smallest text length was determined for texts between 250 to 299 words, followed by the ranges of 300 to 349, 350 to 399, 400 to 449, and 450 and above. For consistency, I applied Kruskal Wallis test for three or more groups and then for the post-hocs, I used the Mann Whitney U for comparisons between two groups. The null hypothesis tested by the Kruskal– Wallis test is that “all samples were drawn from identical populations” (Howell, 2010, p. 683).

The test was run on SPSS while the effect size was computed manually on a scientific calculator as the SPSS did not have this function. Kruskal Wallis test revealed statistically significant differences between the CDPT and the text length, $\chi^2(4) = 16.204, p < .05, r = 0.588$. The SUPT were not found statistically significant in relation to the text length. For comparison between the text length and CDPT, I created 10 groups (T4-MS). The results for both Kruskal Wallis and Mann Whitey U for the corpus are presented in Appendix 10.

T4-MS: Group Scale for the text length

Group 1	G1	Text Length 250 to 299 - Text Length 300 to 349
Group 2	G2	Text Length 250 to 299 - Text Length 350 to 399
Group 3	G3	Text Length 250 to 299 - Text Length 400 to 449
Group 4	G4	Text Length 250 to 299 - Text Length 450 & above
Group 5	G5	Text Length 300 to 349 - Text Length 350 to 399
Group 6	G6	Text Length 300 to 349 - Text Length 400 to 449
Group 7	G7	Text Length 300 to 349 - Text Length 450 & above
Group 8	G8	Text Length 350 to 399 - Text Length 400 to 449
Group 9	G9	Text Length 350 to 399 - Text Length 450 & above
Group 10	G10	Text Length 400 to 449 - Text Length 450 & above

The Mann Whitney U revealed statistically significant differences between SUPT and the text length in G4 only, $U = 7.500, p = .010, r = -0.648$. The results indicated that the frequency of SUPT varied considerably between the two extremes of text length. There were statistically significant differences between the CDPT and text length in group 3, 6 and 7 with $U = .000, p = .003, r = -0.814$; $U = 1.000, p = .027, r = -0.735$; and $U = 4.000, p = .042, r = -0.588$ respectively.

Next, I ran Kruskal Wallis to identify statistically significant difference in the cohesion categories of Reference (R), Substitution (S), Ellipsis (E), Conjunction (C) and Lexical

cohesion (L) in relation to the text length (WPT). The results (Appendix 10) revealed statistically significant differences between R and WPT, $\chi^2(4) = 13.452, p = .009$ and L and WPT, $\chi^2(4) = 12.549, p = .014$. For group comparisons, Mann Whitney U was used for R, C, and L. S and E were excluded from comparison because of the non-significant results. However, C despite being non-significant statistically as per Kruskal Wallis results, was included since it had a considerable presence in the corpus and was considered an important predictor of cohesive relations in academic writing as compared with S and E which are more specific to spoken discourse (Halliday and Hasan, 1976). The results indicated statistically significant strong differences between R and the text length in G3, $U = 2.000, p = .008, r = -0.733$, and G4, $U = .500, p = .005, r = -0.829$. These results indicated that the use of R between the two extremes of text lengths varied considerably as compared with other text length groups. C in relation to the text length was found statistically significant in G7, $U = 2.000, p = .017, r = -0.689$ and G9, $U = 4.500, p = .022, r = -0.635$. L, on the other hand, was statistically significant in G3, $U = 2.000, p = .008, r = -0.732$ and G4, $U = 5.500, p = .005, r = -0.696$.

5.7. Results for research question 1

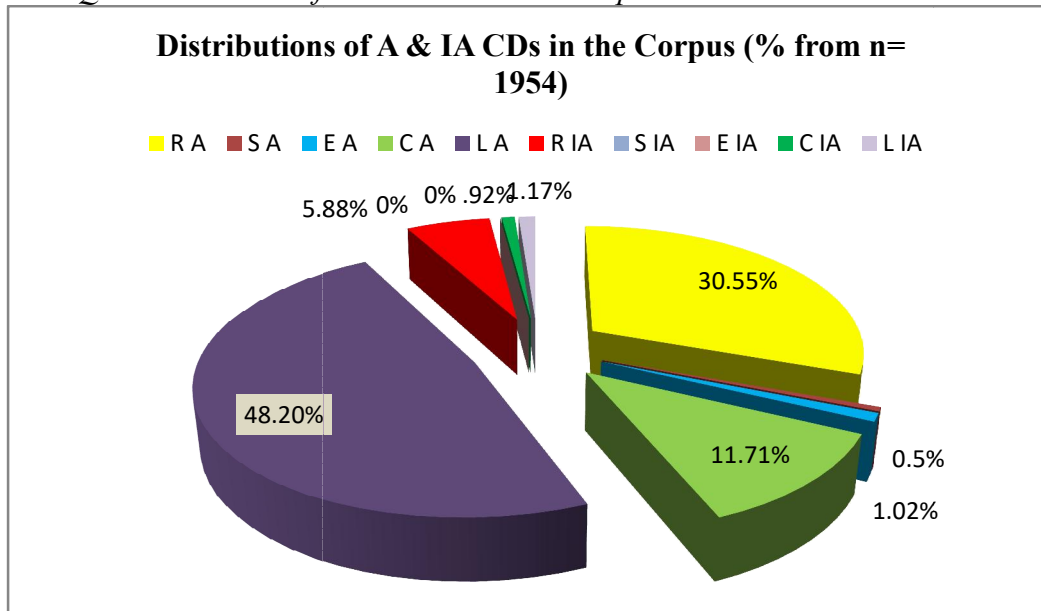
Results for research question 1 (How does inter-sentence cohesion as a non-structural resource contribute to the creation of texture in the argumentative essays by Saudi EFL undergraduate students?) were obtained from analysis of appropriate, inappropriate, and overused CDs in the corpus. While computing cohesive devices for the corpus, I also segregated the devices into appropriate (A), (IA), and overused (OU). The subsections below detail descriptive statistics and percentage scores for the categories and subcategories of the CDs in the corpus as well as the Exam scores and relative scores for cohesion (CDS). These are followed by nonparametric correlation and variance analysis of the variables. Results for non-parametric correlation analysis are presented in Appendix 9, and Kruskal Wallis and the Mann Whitney U are reported in Appendix 10.

5.7.1. Results for appropriate and inappropriate CDs

This sub-section presents results for A and IA CDs of each main category and subcategory to ascertain the extent to which these devices contributed towards the creation of texture in students' texts. C1-RQ1 shows that appropriately used Lexical cohesion (48.20% of the

overall use from 1954 CDs) was the most common choice among the students followed by appropriate use of Reference (30.55%) and Conjunction (11.71%). Substitution and Ellipsis were used appropriately but were very limited and widely scattered in the texts at 0.5% and 1.02% respectively. Inappropriate use of CDs in these texts was, however, not very frequent as compared with the appropriate use. 5.88% of Reference was inappropriately used in the entire corpus followed by Lexical cohesion (1.17%) and Conjunction (.92%). There was no identification of inappropriate use for Substitution and Ellipsis in the corpus.

C1-RQ1: Distribution of A & IA CDs in the corpus



5.7.2. Results for A and IA Reference

On the whole, Reference was the second most frequent device after Lexical cohesion for appropriate use and the most common in terms of inappropriate use of CDs in students' writing. Table T1-RQ1 reveals that R1A ($M = 12.20$; $SD = 8.138$; $Mdn = 10.50$; $IQR = 12$) was the most commonly used reference type appropriately employed by students for 366 times. On the other hand, the inappropriate use of R1IA ($M = 2.73$; $SD = 1.818$; $Mdn = 3.00$; $IQR = 3$) which occurred 82 times in the texts indicated that some students had problems in using the personal reference either in terms of case, number, or gender while referring back to the antecedent. R2A ($M = 6.13$; $SD = 3.350$; $Mdn = 6.00$; $IQR = 5$) was used at 184 instances in the texts while R2IA ($M = 1.10$; $SD = 1.373$; $Mdn = .50$; $IQR = 2$)

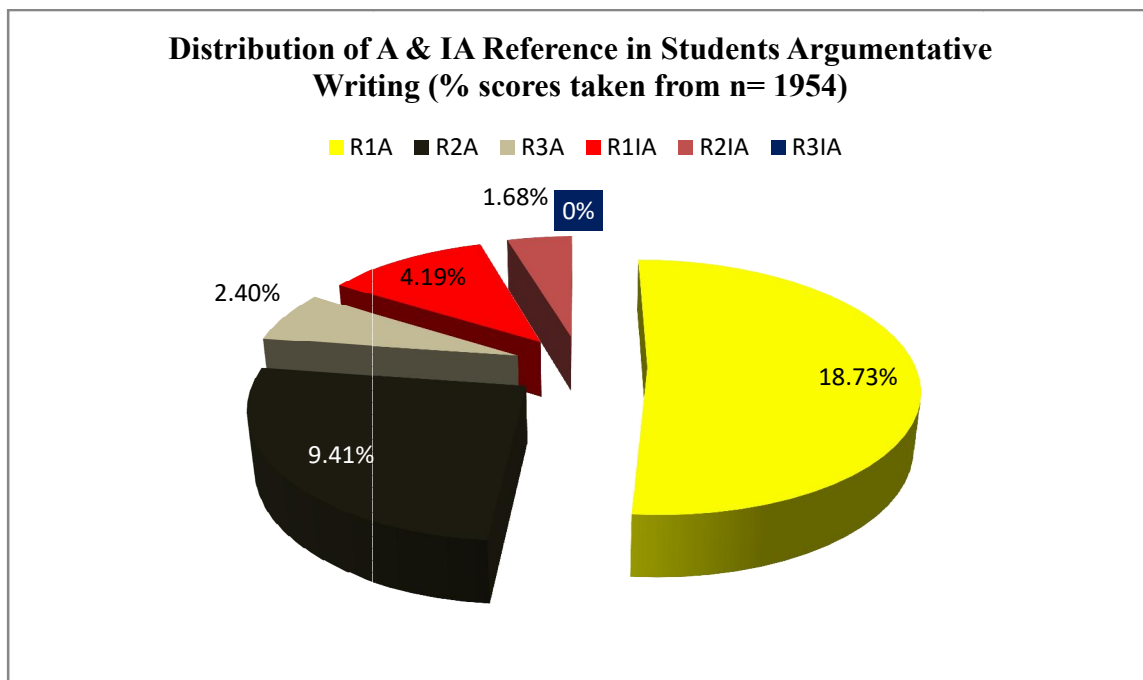
was used 33 times only. These results indicated that students were mostly comfortable while using R2; however, some of them experienced issues with the accurate use which suggested that they could not handle matters of specificity or proximity while referring back to the presupposed item in the text. R3A ($M = 1.57$; $SD = 1.455$; $Mdn = 1.00$; $IQR = 3$) was identified 47 times whereas, no evidence of R3IA could be found in the texts.

T1-RQ1: Descriptive Statistics for A & IA Reference

N = 30	R1A	R1IA	R2A	R2IA	R3A	R3IA
Mean	12.20	2.73	6.13	1.10	1.57	Constant
SD	8.138	1.818	3.350	1.373	1.455	
Median	10.50	3.00	6.00	.50	1.00	
IQR	12	3	5	2	3	
Sum	366	82	184	33	47	

Chart C2-RQ1 illustrates the percentage of A and IA Reference in students' argumentative essays. It can be seen that R1A occurred 18.73% of the overall use of CDs in these texts ($n = 1954$) whereas R1IA use was 4.1% only. Similarly, R2A was found to be 9.41% and R2IA only 1.68%. R3A was the least frequently used reference type which was merely 2.40% of the entire use of CDs in the texts. There was no instance of R3IA found in students' writing.

C2-RQ1: Distribution of A & IA Reference in students' argumentative writing

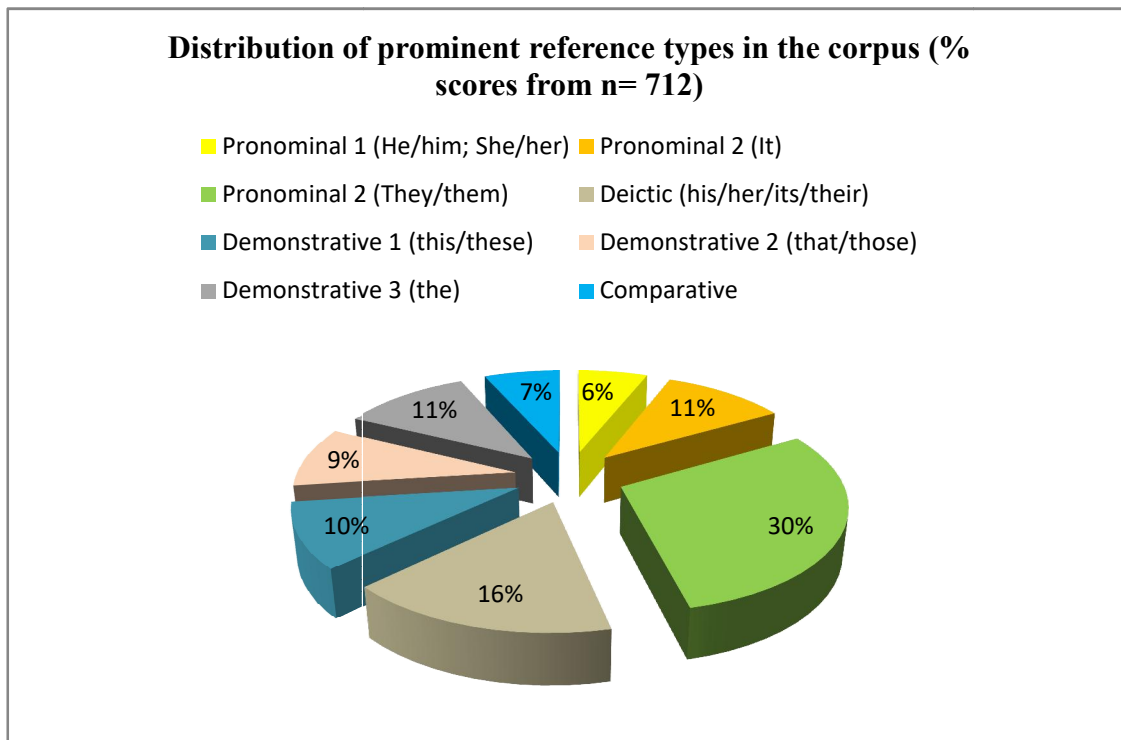


5.7.2.1. Examples of Appropriate (AR) and Inappropriate Reference (IAR) use from the texts

- I. *If you covered all these (AR2) things, you will enjoy your life by traveling, and many more things you can do with money.*
- II. *In the end, people say that money can not buy happiness to rich people because of them (IAR1) being busy all the time and only simple, humble life can make you happy.*

Chart C3-RQ1 reveals distribution of prominent reference items in the corpus. The pronominal "*they/them*" had the highest percentage (30%) of all the items in referential cohesion. The deictic (*his/her/its/their*) accounted for 16% contribution. Other reference types were not seen very prominent. The pronominal (*it*) and the definite article (*the*) were identified at 11% each followed by demonstratives (*this/these*), demonstratives (*that/those*), comparative, and pronominal (*he/she/him/her*) at 10%, 9%, 7% and 6% respectively.

C3-RQ1: Distribution of prominent reference types in the corpus



5.7.2.2. Correlation analysis of A and IA Reference

The correlations of the total reference devices (TR) were tested against Appropriate Reference (AR) and Inappropriate Reference (IAR) devices by Kendall's tau-b. The results revealed positive significant relationship of TR with AR and IAR, and between AR and IAR. TR had a very strong positive significant correlation with AR $r_t = .880, p < .01$, and positive moderate significant relationship with IAR $r_t = .461, p < .01$. There was also weak positive significant relationship between AR and IAR $r_t = .311, p < .05$. The results suggested that most students used AR which increased with an increase in TR; However, the increase in IAR in relation to TR was not as frequent as that of the AR with TR. The results also indicated that there were moderate chances of an increase in IAR with an increase in AR.

5.7.3. Results for A and IA Substitution and Ellipsis

Table T2-RQ1 indicates that both Substitution and Ellipsis were most sparingly used by the students in their writing . Almost the entire use of these CD types was very less in terms of their numerical manifestation. The only rare instances were those of S3A ($M = .27$; $SD = .640$; $Mdn = .00$; $IQR = 0$) and E1A ($M = .43$; $SD = .626$; $Mdn = .00$; $IQR = 1$). No evidence of inappropriate use of any subcategory of Substitution or Ellipsis was, however, found in the texts.

T2-RQ1: Descriptive statistics for A & IA Substitution

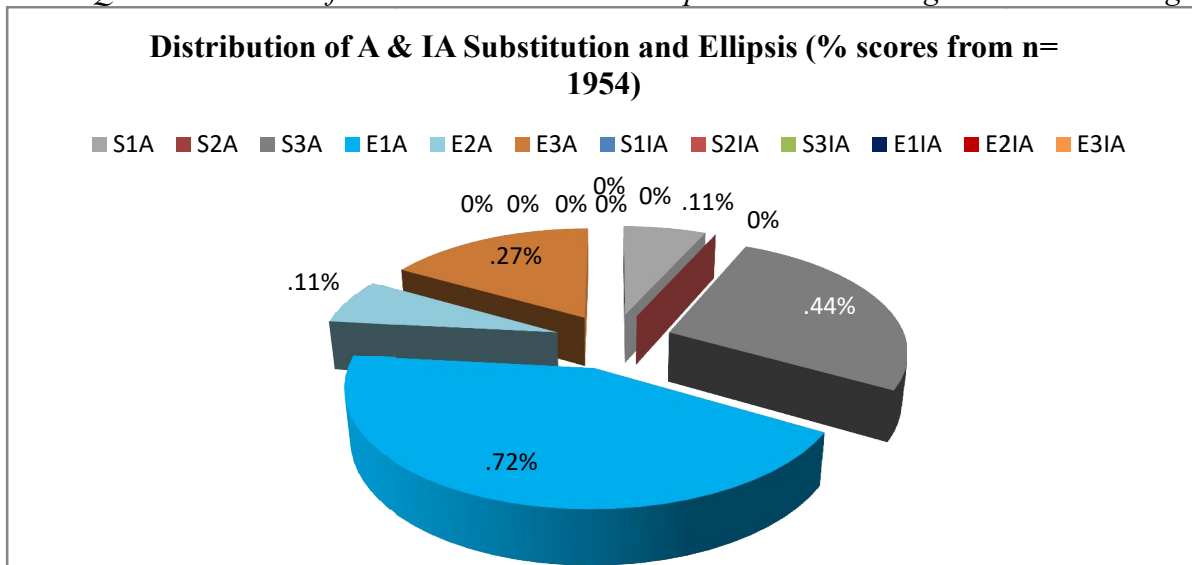
N = 30	S1A	S1IA	S2A	S2IA	S3A	S3IA
Mean	.07	Constant	Constant	Constant	.27	Constant
Std. Deviation	.254				.640	
Median	.00				.00	
IQR	0				0	
Sum	2				8	

T3-RQ1: Descriptive statistics for A & IA Ellipsis

N = 30	E1 A	E1 IA	E2 A	E2 IA	E3 A	E3 IA
Mean	.43	Constant	.07	Constant	.17	Constant
Std. Deviation	.626		.254		.592	
Median	.00		.00		.00	
IQR	1		1		0	
Sum	13		2		5	

Chart C4-RQ1 illustrates the percentage results of the use of Substitution and Ellipsis for both the A and IA categories. As mentioned earlier, no evidence of inappropriate use of both Substitution and Ellipsis was found in the entire corpus. The only noticeable yet very low occurrence found was for E1A (.72%), S3A (.44%) and E3A (.27%) of the entire 1954 use of CDs in students' writing.

C4-RQ1: Distribution of A & IA Substitution & Ellipsis in students' argumentative writing



5.7.3.1. Examples of Appropriate Substitution (AS) and Ellipsis (AE) use from the texts

III. *in addition, marriges when Saudi people start to marry from out side not o (AS3) from Saudi arabia the culture identity of the kid may be less or gone.*

IV. *Some o (AE1) claim that it is impossible for poor people to live happy because they don't have a big house, new car, clean cloths etc.*

5.7.3.2. Correlation analysis for Appropriate Substitution and Ellipsis

Since there were no inappropriate Substitution (IAS) and Ellipsis (IAE) in the corpus, Kendall's tau_b computed very strongly positive significant correlation of total Substitution

(TS) with appropriate Substitution (AS) $r_t = .921$, $p < .01$ and total Ellipsis (TE) with appropriate Ellipsis (AE) $r_t = .957$, $p < .01$ only. The test revealed that there were very strong chances of the students using, if any, S and E in their writing appropriately.

5.7.4. Results for A and IA Conjunctions

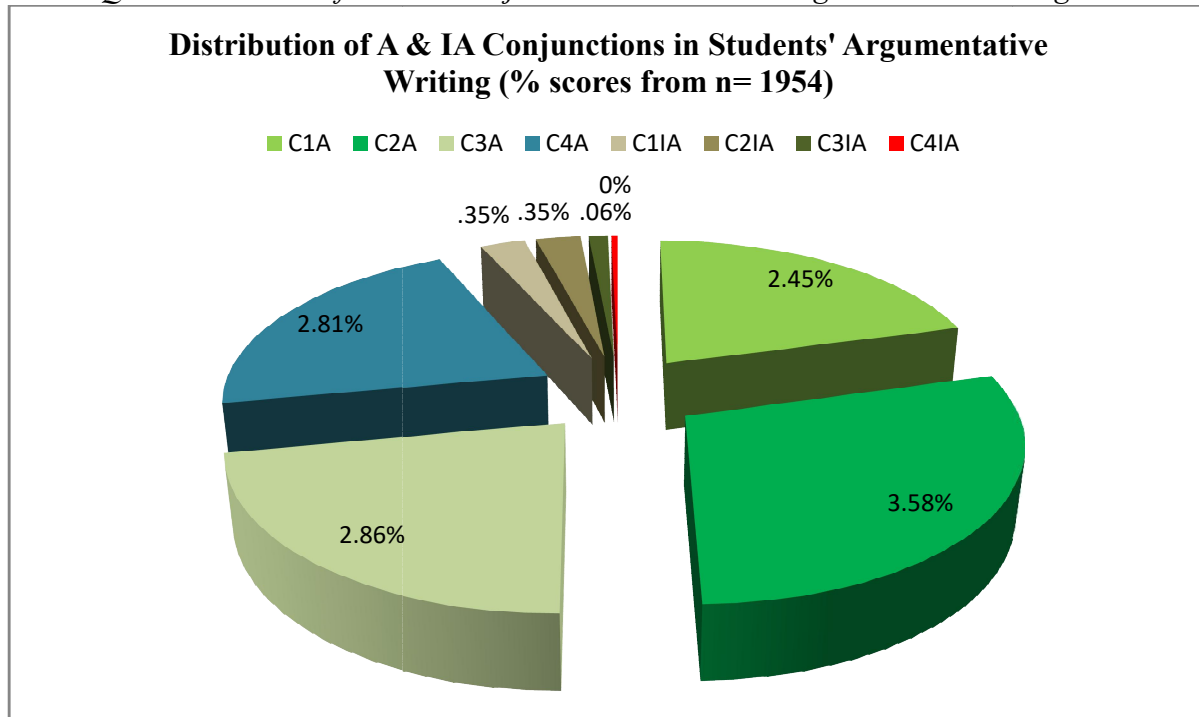
From an overall use of 247 conjunctives in the corpus, 229 were appropriately used by the students. Table T4-RQ1 shows that C2A was the most preferred Conjunction among the students followed by C3A, C4A, and C1A respectively. C1A ($M = 1.60$; $SD = 1.812$; $Mdn = 1.00$; $IQR = 3$) was employed 48 times in the texts as opposed to C1IA ($M = .23$; $SD = .898$; $Mdn = .00$; $IQR = 0$) had a low presence on only 7 occasions. C2A ($M = 2.33$; $SD = 1.516$; $Mdn = 2.00$; $IQR = 2$), on the other hand, was the most commonly used conjunctive in students' essays which they used 70 times. Again, as with C1IA, C2IA was also very sparse and only 7 inappropriate items could be identified in the sample. C3A ($M = 1.87$; $SD = 1.833$; $Mdn = 2.00$; $IQR = 1$) and C4A ($M = 1.83$; $SD = 1.633$; $Med = 1.00$; $IQR = 2$) were used with the minimal difference of 1 item only i.e. 56 and 55 respectively. C3IA had only 3 items whereas, no item was found in the data for C4IA.

T4-RQ1: Descriptive statistics for Conjunction

N = 30	C1 A	C1 IA	C2 A	C2 IA	C3 A	C3 IA	C4 A	C4 IA
Mean	1.60	.23	2.33	.23	1.87	.10	1.83	.03
Std. Deviation	1.812	.898	1.516	.568	1.833	.305	1.663	.183
Median	1.00	.00	2.00	.00	2.00	.00	1.00	.00
IQR	3	0	2	0	1	0	2	0
Sum	48	7	70	7	56	3	55	1

Chart C4.a-RQ1 reveals the percentage distribution of A & IA Conjunctions in the data for the study. Results were obtained from the overall use ($n = 1954$) of CDs in the students' texts to find out the percentage of appropriate and inappropriate use. As can be seen, there was not a large difference in the percentage scores of the appropriate conjunctive use. C2A (3.58%) achieved the highest use followed by C3A (2.86%), C4A (2.81%), and C1A (2.45%). The results also informed that students were mostly able to use conjunctions appropriately, and the instances of inappropriate use were very few. C1IA and C2IA both formed (0.35%) of the entire use of CDs in students' writing.

C4.a-RQ1: Distribution of A & IA Conjunctions in students' argumentative writing

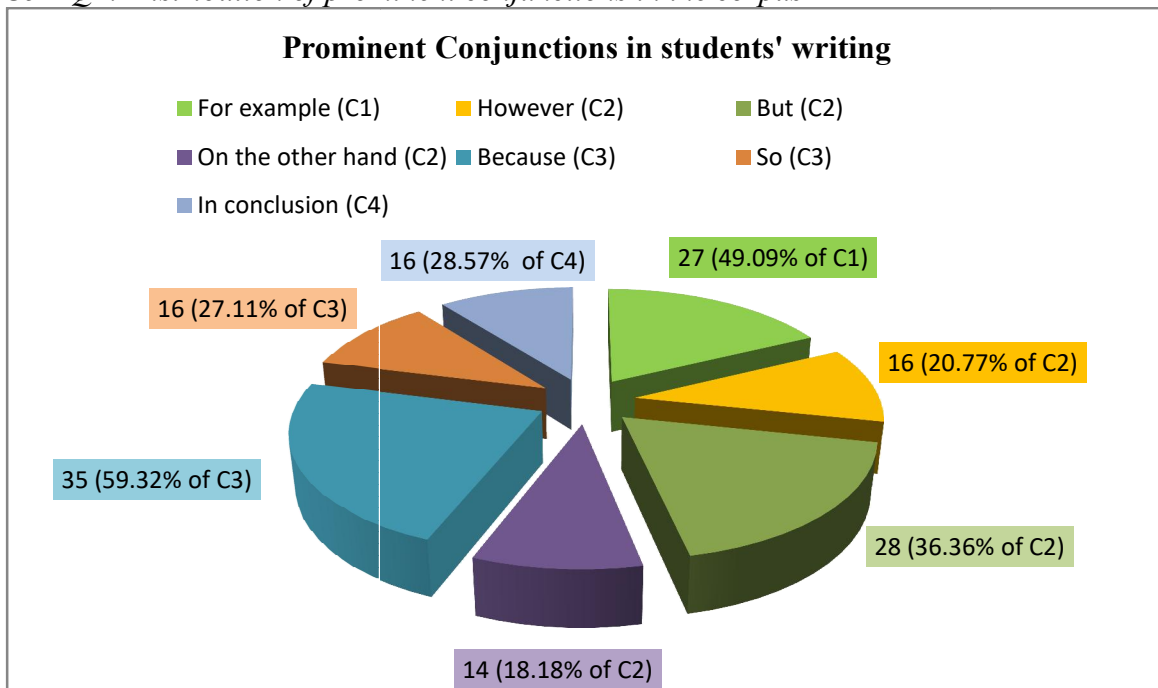


5.8.4.1. Examples of Appropriate (AC) and Inappropriate Conjunction (IAC) use from the texts

- V. *People also think that people with money are not happy, because (AC3) they are thinking about the money all the time and have no time for free, happy thinking.*
- VI. *In the other side (IAC2), youth who are living in cities will definitely lose their identity.*

Chart C5-RQ1 reveals distribution of prominent conjunctives in the corpus. The additive "for example" (49.09%) was the most frequently use device in its category. Among the adversative conjunctives, "but" (36.36%) had the highest frequency in its category followed by "however" (20.77%) and "on the other hand" (18.18%). The causal "because" (59.32%) and "so" (29.11%) showed the highest presence in their category. "in conclusion" (28.57%) was the only high frequency temporal conjunctive in its category.

C5-RQ1: Distribution of prominent conjunctions in the corpus



5.7.4.2. Correlation analysis for A and IA Conjunctions

The correlation of the total Conjunction (TC) with appropriate Conjunctions (AC) and inappropriate Conjunctions (IAC) was computed using Kendall's tau_b which revealed a very strong positive significant relationship with AC $r_t = .899$, $p < .01$. No significant relationship was found between TC and IAC, and AC and IAC. The results indicated that there were very high chances of the students making appropriate choice in regard to the use of conjunctive devices in their texts.

5.7.5. Results for A & IA Lexical cohesion

Lexical cohesion formed almost half of the CDs in students' argumentative writing. Following Al-Jabouri (1984), I analyzed repetition (L1) as a cohesive device by counting not only instance of the repetition of the same lexical item but also identified, wherever evident, presence of morphological and chunk-level repetition (Appendix 6). All subcategories of repetition were, however, computed as belonging to L1 without any further classification into their respective subclasses.. Table T5-RQ1 unfolds that L1A ($M = 24.20$; $SD = 8.837$; $Mdn = 22.00$; $IQR = 14$) with 726 items found the highest preference among the student

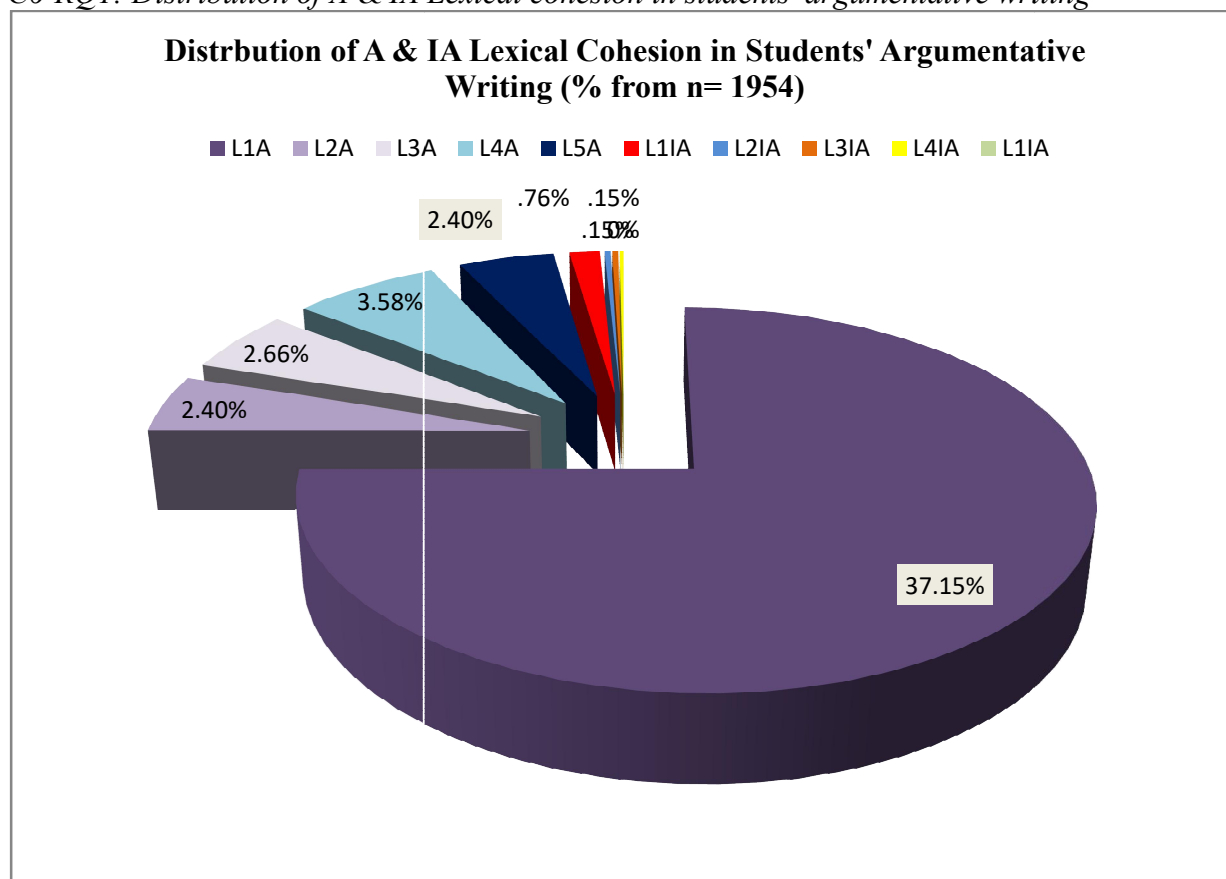
writers. These results made L1A the most prominent feature of students' texts especially in view of the existence of only 15 L1IA items ($M = .50$; $SD = 1.225$; $Mdn = .00$; $IQR = 5$). Other types of appropriate Lexical cohesion is visible in the texts but to a very limited extent. L2A ($M = 1.57$; $SD = 1.813$; $Mdn = 1.00$; $IQR = 3$); L3A ($M = 1.73$; $SD = 1.68$; $Mdn = 1.50$; $IQR = 3$); L4A ($M = 2.33$; $SD = 2.187$; $Mdn = 2.00$; $IQR = 2$) and L5 ($M = 1.57$; $SD = 2.239$; $Mdn = 1.00$; $IQR = 2$) comprised of 47, 52, 70 and 47 lexical items respectively. The inappropriate use of these types of Lexical cohesion, on the other hand, was not very frequent. The results revealed that despite the overwhelming use of L1A which indicated extremely low levels of the lexical range of the students, the occurrence of inappropriate use was not common.

T5-RQ1: Descriptive statistics for Lexical cohesion

N = 30	L1 A	L1 IA	L2A	L2 IA	L3 A	L3IA	L4 A	L4 IA	L5 A	L5 IA
Mean	24.20	.50	1.57	.10	1.73	.10	2.33	.07	1.57	Constant
Std. Deviation	8.837	1.225	1.813	.403	1.680	.403	2.187	.254	2.239	
Median	22.00	.00	1.00	.00	1.50	.00	2.00	.00	1.00	
IQR	14	5	3	0	3	0	2	0	2	
Sum	726	15	47	3	52	3	70	2	47	

Chart C6-RQ1 unveils the percentage use of appropriate and inappropriate Lexical cohesion in students' argumentative essays. It is clearly evident that of the use L1A (37.15%) was the norm as far as Lexical cohesion in these texts was concerned. Students seemed at ease while using L1 as there was only 2.40% of L1IA use in their texts. Other types of Lexical cohesion was not as frequently seen as L1. This was followed by 3.58% of L4A while L2A and L5A had the same percentage of 2.40% each. L3A (2.66%), however, got a slightly higher percentage than L1A and L2A. The inappropriate use of L2, L3, L4, and L5 was very low, and thereby quite low in terms of percentage scores. The overall results of Lexical cohesion indicated that students had limited repertoire of lexical knowledge which they could employ in their writing and, therefore, mostly depended on L1 for establishing cohesive links in their texts.

C6-RQ1: Distribution of A & IA Lexical cohesion in students' argumentative writing



5.7.5.1. Examples of Appropriate (AL) and Inappropriate Lexical cohesion (IAL) use from the texts

- I. *However, youth themselves claim that wearing any thing other than thobs (AL1) doesn't change (AL5) their culture identity (AL1). They claim (AL1) that wearing thobs (AL1) in ocasions and festivals is enough and it wont effect (AL5 collocates with change) their culture identity (AL1).*
- II. *Opponents claim that this college hard life (IAL1) with too many tests teach students responsibility and managing their time.*

5.7.5.2. Correlation analysis for A and IA Lexical cohesion

Kendall's tau_b was applied to test the correlation of the total lexical cohesion (TL) with appropriately used lexical devices (AL) and inappropriately used ones (IAL). The test

showed (Appendix 9) very strong positive significant correlation between TL and AL $r_t = .936, p < .01$. No significant correlation was found between TL and IAL, and AL and IAL. The results suggested that there were highly strong chances of the students being able to use lexical cohesion in their texts appropriately.

5.7.6. Results for the overuse of CDs in students' writing

For the present study, the measure of overuse of CDs was an important variable in ascertaining the extent to which cohesion created texture in students' texts. Table T6-RQ1 reveals that there was considerable presence of overused CDs in the sample texts. A total of 395 overused items was identified in the corpus of CDs ($n = 1954$). Lexical cohesion ($M = 10.33$; $SD = 8.206$; $Mdn = 10.00$; $IQR = 14$) with 310 was the most excessively used device. The results indicated that Lexical cohesion was quite consistently distributed across the texts. This was followed by Reference ($M = 2.13$; $SD = 3.213$; $Mdn = .50$; $IQR = 4$) with 64 items and Conjunction ($M = .70$; $SD = 1.055$; $Med = .00$; $IQR = 1$) with 21 devices only. The presence of Reference and Conjunctions in the texts was more widely scattered as compared with Lexical cohesion.

T6-RQ1: Descriptive statistics for overuse of CDs

N = 30	Overused R	Overused C	Overused L
Mean	2.13	.70	10.33
Std. Deviation	3.213	1.055	8.206
Median	.50	.00	10.00
IQR	4	1	14
Sum	64	21	310

Chart C7-RQ1 presents percentage results of overused items in the corpus of 1954 CDs in students' texts. Lexical cohesion constituted 15.86% overuse of the corpus followed by Reference (3.27%) and Conjunction (1.07%) respectively.

C7-RQ1: Distribution of overused CDs in students' writing

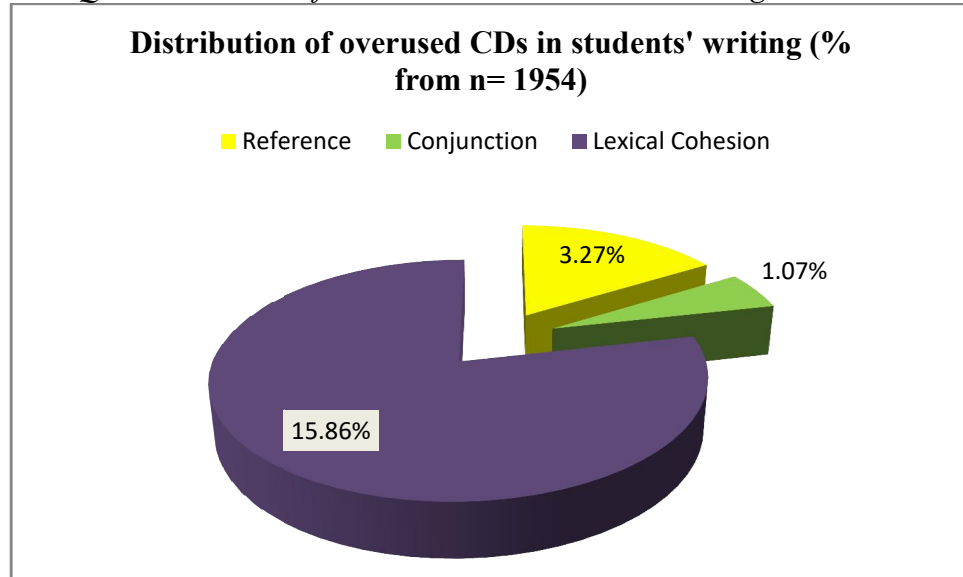
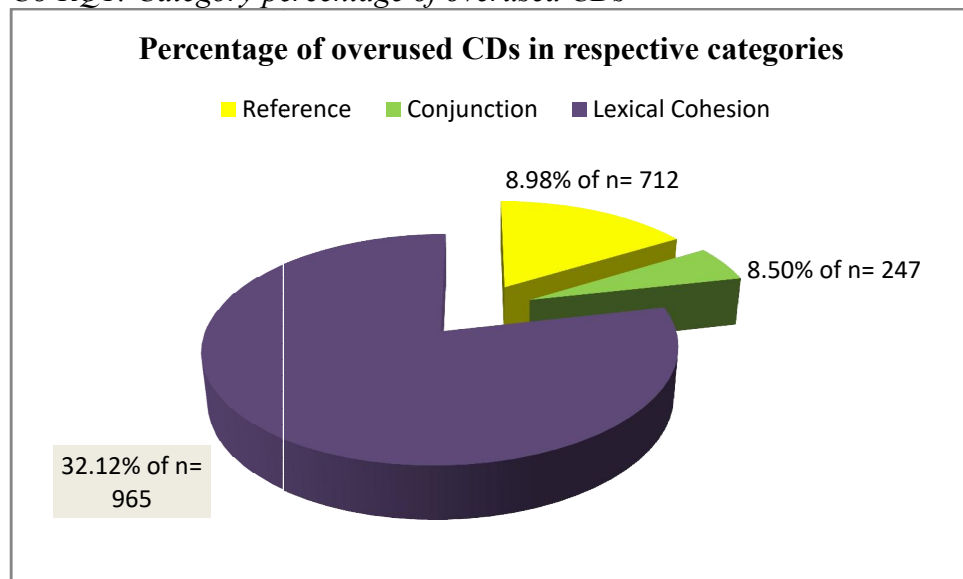


Chart C8-RQ1 shows the percentage of overused CDs in their respective category. The results indicated that 8.98% of referential items from a total of 712 were overused. Similarly, 8.50% Conjunctions from a total of 272 were overused. However, Lexical cohesion received the highest score of 32.12% from the overall 965 lexical items across all texts.

C8-RQ1: Category percentage of overused CDs



5.7.6.1. Examples of overused CDs (OU) from the sample texts

- I. *Almost all students of Yanbu Industrial college want the best way to evulate his level. To find the better way to evulate the level of the students is not easy and also in the same time is not difficult. One of the way to evulate the level of the students is testing. To sum up, weather you agree with the too much testing or not in Yanbu Industrial College, you have to follow the way of evulate the students that applied in Yanbu Industrial College. Although many students prefer the testing way. For me I do not.*

5.7.6.2. Correlation analysis for the overused CDs

In order to see if there was any statistically significant relationship between the overused reference (OR) and CDPT, overused conjunctions (OC) and CDPT, overused lexical cohesion (OL) and CDPT, and the relationship within the cohesion categories i.e. between TR and OR, TC and OC, TL and OL, as well as across these categories, I used Kendall's tau_b test of correlation. The test results (Appendix 9) found moderate positive significant relationship between OR and CDPT $r_t = .400, p < .01$ and between OL and CDPT $r_t = .448, p < .01$. OR was found significant and moderately positively related with both TR $r_t = .519, p < .01$ and OL $r_t = .416, p < .01$. OC had a moderate positive significant correlation with TC $r_t = .513, p < .01$ whereas OL showed moderate positive significant relationship with TL $r_t = .504, p < .01$ and weak positive significant correlation with TR $r_t = .293, p < .05$. The results indicated that there were moderate chances of an increase in the number of OR and OL when there was an increase in CDPT. Moreover, a corresponding moderate increase in OR, OC, and OL was expected as TR, TC, and TL increased in number. The results also pointed towards a moderate increase in OR with an increase in OL, and a small increase in OL with an increase in TR.

5.7.6.3. Nonparametric analysis of variance between A, IA, and OU CDs

Kruskal Wallis revealed statistically significant differences between the main categories of Appropriate Reference (AR), Inappropriate Reference (IAR), Overused Reference (OUR),

Appropriate Conjunction (AC), Inappropriate Conjunction (AC), Overused Conjunction (OUC) and Appropriate Lexical cohesion (AL), Inappropriate Lexical cohesion (IAL) and Overused Lexical cohesion (OUL), $\chi^2(8) = 208.898, p < .01$. Mann Whitney U (Appendix 10) produced a series of comparison between A, IA, and OU CDs. Only statistically significant comparisons are being presented. Statistically significant comparisons with $U = .000$ which indicated large differences in the variable sizes being compared are not being reported.

AR-AL, $U = 7.000, p = .001, r = -0.845$, AC-AL, $U = 14.000, p = .001, r = -0.832$, AL-IAR, $U = 57.000, p = .001, r = -0.751$, AL-IAC, $U = 10.000, p = .001, r = -0.861$, AL-IAL, $U = 14.000, p = .001, r = -0.851$, AL-OUR, $U = 45.000, p = .001, r = -0.779$, AL-OUC, $U = 13.000, p = .001, r = -0.886$, AL-OUL, $U = 262.500, p = .005, r = -0.358$, IAR-IAC, $U = 110.000, p = .001, r = -0.676$, IAR-IAL, $U = 133.000, p = .001, r = -0.628$, IAR-OUR, $U = 263.000, p = .004, r = -0.374$, IAR-OUC, $U = 123.000, p = .001, r = -0.641$, IAR-OUL, $U = 263.000, p = .005, r = -0.358$, IAC-OUR, $U = 328.000, p = .039, r = -0.266$, IAC-OUL, $U = 138.000, p = .001, r = -0.632$, IAL-OUL, $U = 145.500, p = .001, r = -0.613$, and OUR-OUL, $U = 194.500, p = .005, r = -0.500$ and OUC-OUL, $U = 148.500, p = .001, r = -0.598$ were found to be statistically significantly different in their mean ranks.

5.7.7. Writing quality in relation to cohesion scores (CDS)

The essay samples were collected from two different exam settings - the Mid and the Final Term from the ELI, Yanbu Colleges and Institutes, Saudi Arabia. The students had been taught argumentative essays from the prescribed textbook *Writing Academic English* (4th Ed) by Oshima and Hogue (2006). Chapter two "Unity and Coherence" (p. 18 -37) did not provide for cohesion as a distinct text feature. The subsections under "Coherence" included "repetition of key nouns", "key noun substitutes", "consistent pronouns", "transition signals", and "logical order" implying cohesion as 'unity' was built into coherence.

Following this prescribed content, students' writing in these exams was assessed on a three-point criteria (Appendix 5) based on '*structure and organization*', '*grammar and mechanics*', and '*content*'. There were no separate benchmarks for the assessment of cohesion in this assessment rubric. The scores were awarded holistically as the marked scripts collected for this study did not show any analytical procedures being adopted for assessment on the three-

point criteria. Keeping this assessment context in mind, I had two issues to deal with: figure out how to deal with students' errors while doing cohesion analysis as I had used the texts with all the errors intact, and devise a scale for obtaining the relative score for cohesion in the texts.

5.7.7.1. Dealing with erroneous student writing

Assessment of writing in academic contexts is quite a challenging issue because of variations in the understanding and interpretation of the concept of writing construct (Weigle, 2002) with the result that linking marking criteria with the learning outcomes of the course cannot be fully justified (Brown and Hudson, 2002). More than often, the quality of writing is judged in compliance with the writing rubrics which runs counter with the construct validity, and tests are vulnerable to measure the construct of compliance to the rubric rather than the construct of writing (Nichols and Berliner, 2005). With this in mind, I decided to analyze the sample texts inclusive of the errors they revealed. However, I focused only on those selected errors (Valero et al., 2008) which adversely affected the cohesive element in the texts, and which had been referred to in (4.4.9.1.). Halliday and Hasan's (1976) - the framework for my study - also supported the choice for this selective focusing on cohesion errors. As referred to in (4.4.9.1.), I operationalized the inappropriate use (IA) of cohesive devices for my analysis, and focused only on those aspects of misuse which reduced or disrupted cohesion in students' texts. I found that Halliday and Hasan's (1976) framework was very explicit in its identification of the lack of cohesion. So, the incidence of inappropriate use of any of the 18 cohesion categories proposed by Halliday and Hasan (1976) which reduced cohesion in the sample texts was considered to be the targeted error for my study. I did not analyze other types of errors. My choice of identifying cohesion errors only was also dictated by the fact that I had proposed to correlate and compare the relative score of cohesion with the text length and overall cohesive devices. Other measures of writing assessment such as '*text organization*' and '*grammar and mechanics*' were, therefore, deemed extraneous to the focus of the study.

5.7.7.2. Exam and relative scores for cohesion in texts

Developing a relative score for cohesion grades was a challenging issue for two main reasons: First, the assessment rubrics did not provide for any explicit assessment of cohesion, and the marked scripts, therefore, did not have any scores allocated for cohesion analysis. The rubrics only referred to transitional signals and that too in both '*text organization*' and '*content*' (Appendix 5). Secondly, the scripts were collected from two different exams (the Mid & the Final term) with different allocation for total marks for the essay (Appendix 6). Even the allocation for the three-point assessment scale as shown in Table T7-RQ1 and T8-RQ1 was different.

T7-RQ1: Mid-term assessment scale

Mid-term			
Text organization	Grammar & mechanics	Content	Total
5	3	12	20
25% of 20	15% of 20	60% of 20	

T8-RQ1: Final term assessment scale

Final-term			
Text organization	Grammar & mechanics	Content	Total
4	3	8	15
26.6% of 15	20% of 15	53.33% of 15	

In the absence of clear provision for assessment of cohesion and even grading scale, I had to figure out both the issues to create a relative index for cohesion scores. Following the assessment rubric, I decided to derive the cohesion scores from the '*content*' as '*text organization*' dealt with generic structuring of the essay, and '*grammar and mechanics*' provided for the structural resources of language use. I also kept the pedagogic context in mind where cohesion was taught in conjunction with coherence. So, I assumed that cohesion and coherence would be 50% of the scores for '*content*', while the remaining 50% for other textual features. I decided to use this 50% of cohesion and coherence scores for relating cohesion with text quality, and did not further segregate cohesion and coherence because the

students had not been trained as such. Next, I attempted to balance the uneven grading scale so that I could obtain a reliable measure of the scores.

I decided to use the Mid-term scale for cohesion analysis of the texts because of its even percentage distribution among the assessment scales. First, I converted the '*text organization*', '*grammar and mechanics*', and '*content*' marks for the Final-term into 5, 3, and 12 so that the assessment scale was uniform for all text scores. Next, the scores for the Final-term scripts obtained on the new scale were totaled and considered 'Exam scores' for the purpose of analysis. The '*content*' scores were divided by two to get the cohesion scores for the present analysis. In other words, cohesion scores were 50% of the '*content*' scores (Appendix 8). These scores were used to correlate and compare cohesion and writing quality.

These scores could not be tested for inter-rater reliability because the exam scripts were collected from two different exam settings. Each rater assessed his group only. As stated above, the scoring criteria was not uniform, especially there was no provision for rubrics for the assessment of cohesion. Hence, I assumed that inter-rater reliability would not be a feasible concept for this study.

5.7.7.3. Exam scores & CDS in relation to the corpus

First, I obtained the descriptive statistics for the CDS in relation with other variables of the corpus. The descriptive statistics for WPT, SUPT and CDPT have already been reported in (5.6). Table T9-RQ1 shows the distribution of the Exam scores, $M = 14.65$; $SD = 1.917$; $Mdn = 14.75$; $IQR = 3.78$ and CDS in the corpus with $M = 4.14$; $SD = .627$; $Mdn = 4.25$; $IQR = 1.20$.

T9-RQ1: Descriptive statistics for Exam & CD Scores in the corpus

N = 30	WPT	SUPT	CDPT	Exam scores	CDS
Mean	381.20	20.93	65.13	14.65	4.14
Std. Deviation	84.076	3.999	17.202	1.917	.627
Median	375.50	21.00	64.50	14.75	4.25
IQR	166	6	28	3.78	1.20
Sum	11436	628	1954		

5.7.7.4. Correlation analysis of the Exam scores and CDS with the corpus

Kendall's tau_b test was used to find out if there was any significant relationship of the Exam scores and the students' relative cohesion scores (CDS) with WPT, SUPT and CDPT. The results revealed very strong positive association between the Exam scores and the CDS, $r_t = .847, p < .01$. However, CDPT was only weakly and positively correlated with CDS $r_t = .313, p < .05$. The results indicated that the text length and the number of sentences did not associate with students' Exam and cohesion scores. The results indicated that the cohesion scores were likely to increase on a very strong scale with an increase in the Exam scores. The results also showed that students' cohesion scores depended on the number and type of CDPT only to a lesser extent though.

5.7.7.5. Exam scores and CDS in relation to the total cohesion categories

The Exam scores were found having weak positive association with TR, $r_t = .318, p < .05$ and TE, $r_t = .377, p < .05$. CD scores (CDS) were also statistically significant, and weakly positively correlated only with TR $r_t = .295, p < .05$ and TL $r_t = .322, p < .05$. The results indicated that an increase in the Exam scores and CDS would result in a corresponding level increase in TR, TE, and TL respectively.

5.7.7.6. Exam scores and CDS correlation with appropriate (ACDs), inappropriate (IACDs) & overused (OU) CDs

Kendal's tau_b revealed weak positive relationship between the Exam scores and total ACDs, $r_t = .294, p < .05$, Exam scores and AR, $r_t = .344, p < .05$, and moderate positive association between the Exam scores and AE, $r_t = .427, p < .01$. CDS were identified as having weak but positive correlation with ACDs $r_t = .364, p < .05$, AR, $r_t = .348, p < .05$, AE, $r_t = .357, p < .05$, and AL, $r_t = .296, p < .05$. There was no significant correlation found between CDS and IACDs, OUR, OUC, and OUL respectively. The results showed that there was a slight increase in the Exam scores and CDS in texts with a slightly higher proportion of ACDs. CDS did not seem to be affected by inappropriate CDs, and low and high presence of the overused CDs.

5.7.7.7. Exam Scores, CDS and CD density

Kruskal Wallis test was run to see if there were any statistically significant differences in the Exam scores and CDS in regard to CD density in texts. As such the CDs in the 30 sample texts were identified as having low density, moderate density and high density according to the following scale:

T10-RQ1: Density groups for cohesion in texts

Group #	CD density group	N	Density scale
Group 1	Low density group	10	39 to 56 CDs
Group 2	Moderate density group	10	57 to 71 CDs
Group 3	High density group	10	72 & above CDs

The test aimed at finding out any statistically significant differences between WPT, SUPT, the Exam scores and CDS in regard to cohesive density. Test results were found statistically significant for WPT, $\chi^2(2) = 16.211, p < .01, r = 0.559$, SUPT, $\chi^2(2) = 6.202, p = .045, r = 0.213$, Exam scores, $\chi^2(2) = 6.225, p = .044, r = 0.214$, and CDS, $\chi^2(2) = 7.556, p = .023, r = 0.260$. Mann Whitney U was applied to compare group differences in these variables. The results for WPT between low and moderate, and low and high density groups ($U = 12.000, p < .01, r = -0.643$ & $U = 15.000, p < .01, r = -0.820$), for SUPT between low and high density groups ($U = 20.500, p = .024, r = -0.502$), for Exam scores between low and high density groups ($U = 20.500, p = .022, r = -0.506$), and for CDS between low and moderate, and low and high density groups ($U = 24.000, p = .49, r = -0.502$ & $U = 16.500, p < .01, r = -0.576$) were found statistically significant.

Next, I ran Kruskal Wallis test to find out statistically significant differences in the use of the CDPT categories. The results revealed statistically significant in R, $\chi^2(2) = 19.140, p < .01, r = 0.66$, S, $\chi^2(2) = 8.482, p = .014, r = 0.29$, and L, $\chi^2(2) = 15.769, p < .01, r = 0.543$ in terms of cohesive density. Comparisons drawn from the MWU revealed that there were statistically significant differences in the use of Reference between low and moderate cohesive density, $U = 17.000, p = .011, r = -0.559$, low and high cohesive density, $U = 1.000, p < .01, r = -0.829$, and moderate and high cohesive density, $U = 9.500, p < .01, r = -0.685$. The results for L were statistically significant between low and moderate cohesive density, $U = 16.500, p = .010, r = -0.567$, and between low and high cohesive

density texts, $U = .500$, $p < .001$, $r = -0.837$. Other CDs were not found statistically significant.

Finally, Kruskal Wallis failed to show any statistically significant differences in the text length groups (5.7.2.) in relation to both the Exam scores and CDS which indicated that the text length did not affect students' cohesion scores in their writing. The nonparametric variance analysis thus revealed that cohesive density rather than the text length i.e. the use of CDs, especially in the low and moderate and the low and high density groups was a significant variable that affected students' cohesion grades in their writing.

5.8. Results for research question 2

Results for research question 2 (How does cohesion function in the rhetorical structure (RS) of these argumentative essays?) attempted to observe the function of CDs in the RS of the argumentative essays written by Saudi undergraduate students of EFL. The corpus of 1954 CDs was spread over three main stages of the RS: Thesis/Introduction, Argument, and Conclusion. These parts of the RS had 13 moves as had been referred to previously in the Chapter on Research Methods.

Table T1-RQ2 shows the distribution of CDs in the three stages of the argumentative essays ($n = 30$). A total of 326 CDs was found in the Introduction stage with $M = 10.87$; $SD = 4.462$; $Mdn = 10.50$; $IQR = 6$. The Argument stage - the main part of the text - had 1382 CDs with $M = 46.07$; $SD = 14.049$, $Mdn = 44.00$; $IQR = 23$. The lowest number was seen in the Conclusion stage which had 246 CDs with $M = 8.20$; $SD = 4.147$, $Mdn = 7.50$; $IQR = 6$.

T1-RQ2: Descriptive statistics for CDs in the three stages of the rhetorical structure

		CDs Introduction	CDs Argument	CDs Conclusion
N	Valid	30	30	30
	Missing	0	0	0
Mean		10.87	46.07	8.20
Median		10.50	44.00	7.50
Std. Deviation		4.462	14.049	4.147
IQR		6	23	6
Sum		326	1382	246

5.8.1. Correlation analysis of the CD categories in the rhetorical structure

Non-parametric correlation results for Research Question 2 are presented in Appendix 11. As proposed in (4.4.9.2), Kendall's tau_b was used to compute associations between the individual cohesion devices (N = 18) in the 13 move rhetorical structure of the students' argumentative essays. R1 showed strong positive association with R2, $r_t = .685, p < .01$ and R3, $r_t = .621, p < .01$ whereas, R2 had moderate positive correlation with R3, $r_t = .533, p < .05$. Similarly, S3 was moderately positively related with E1 $r_t = .537, p < .05$. There was strong positive association between E1 and E2, $r_t = .733, p < .01$ and E1 and E3, $r_t = .733, p < .01$. E2 and E3 showed a perfect positive correlation, $r_t = 1.000, p < .01$. No significant correlation was found between the four sub-categories of Conjunction i.e. C1, C2, C3, and C4. Kendall's tau_b revealed strong positive associations between L1 and L2, $r_t = .658, p < .01$, L1 and L5, $r_t = .644, p < .01$, L2 and L4, $r_t = .657, p < .01$ and marginally strong positive between L3 and L5, $r_t = .599, p < .01$. Other statistically significant results were the moderate positive correlations between, L1 and L4, $r_t = .473, p < .05$, L2 and L5, $r_t = .529, p < .05$ and L3 and L5, $r_t = .586, p < .01$.

5.8.2. Distribution of CDs in Thesis/Introduction

Chart C1-RQ2 illustrates the distribution of CDs in the five moves of Introduction namely the Gambit, Information, Proposition, Evaluation and Marker. A total of 326 CDs was discovered in Introduction out of which the major chunk (45%) was used in Information. This was followed by Proposition (26%), Evaluation (13%), Marker (10%), and Gambit (6%). These results showed that Information move being the most quantitative part in the rhetorical stage, as a rule, contained the highest numbers of CDs in the Introduction. Proposition, a mandatory component of Introduction, also appeared prominent as far as the use of CDs in Introduction was concerned.

C1-RQ2: Distribution of CDs in Introduction

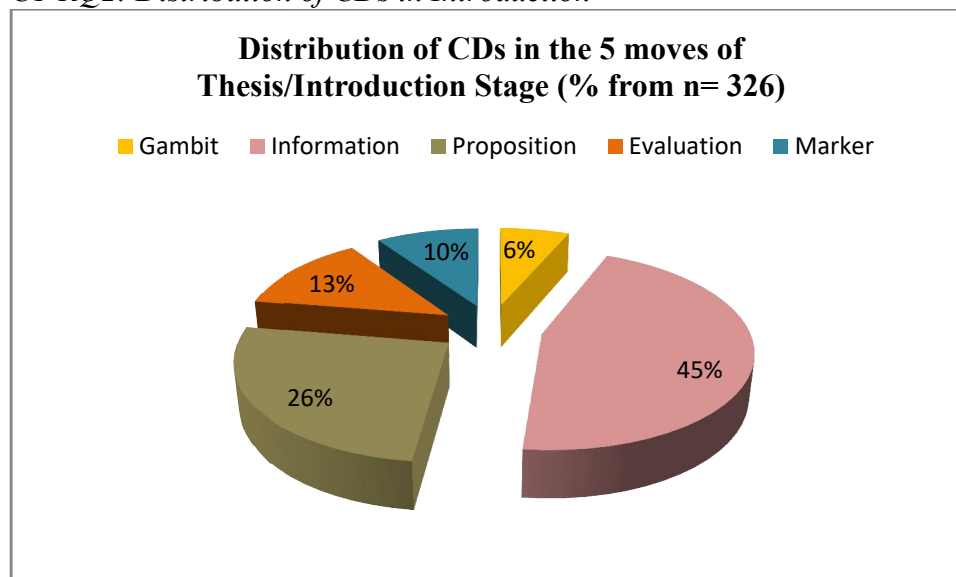


Table T2-RQ2 shows the results for the distribution of CDs in the five moves of Introduction stage of students' essays. The results revealed that referential cohesion ($M = 4.20$, $SD = 2.809$, $Mdn = 3.50$, $IQR = 3$) and lexical cohesion ($M = 5.50$, $SD = 2.556$, $Mdn = 5.00$, $IQR = 4$) were the most commonly used devices in Introduction followed by Conjunctives ($M = .90$, $SD = 1.062$, $Mdn = 1.00$, $IQR = 2$). Substitution and Ellipsis were rarely used in the five-move stage of Introduction.

T2-RQ2: Descriptive statistics for CDs in the Introduction stage of the rhetorical structure

		Reference	Substitution	Ellipsis	Conjunction	Lexical Cohesion
N	Valid	30	30	30	30	30
	Missing	0	0	0	0	0
Mean		4.20	.10	.17	.90	5.50
Median		3.50	.00	.00	1.00	5.00
Std. Deviation		2.809	.305	.461	1.062	2.556
IQR		3	0	0	2	4

Chart C2-RQ2 shows the category distribution of CDs in Introduction. It can be observed that Lexical cohesion with 51% of the overall use of 326 items in Introduction was the most dominant device used by the students. Reference was next with 38.65% of presence in Introduction followed by Conjunction (8.28%), Ellipsis (1.53%), and Substitution (.92%) respectively.

C2-RQ2: Category distribution of CDs in Introduction

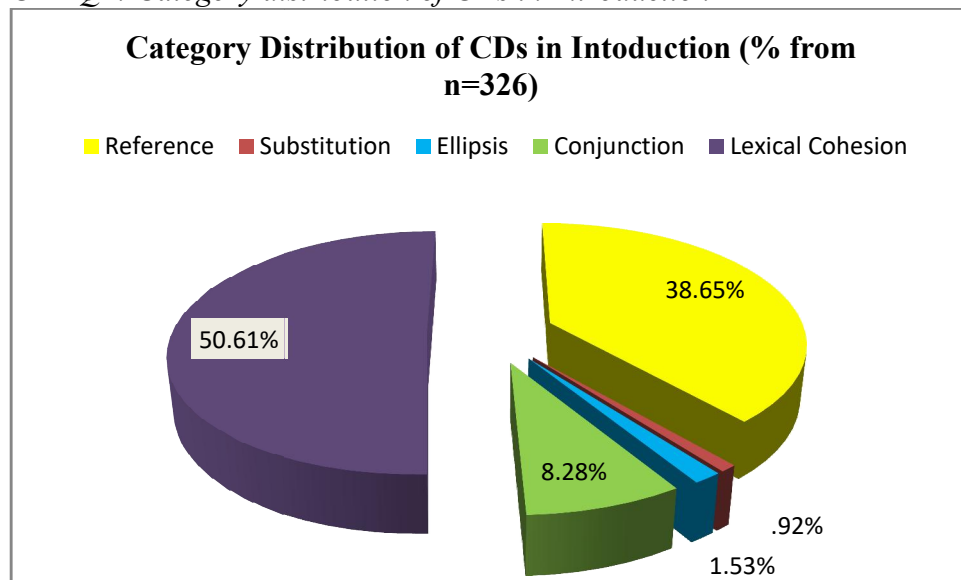
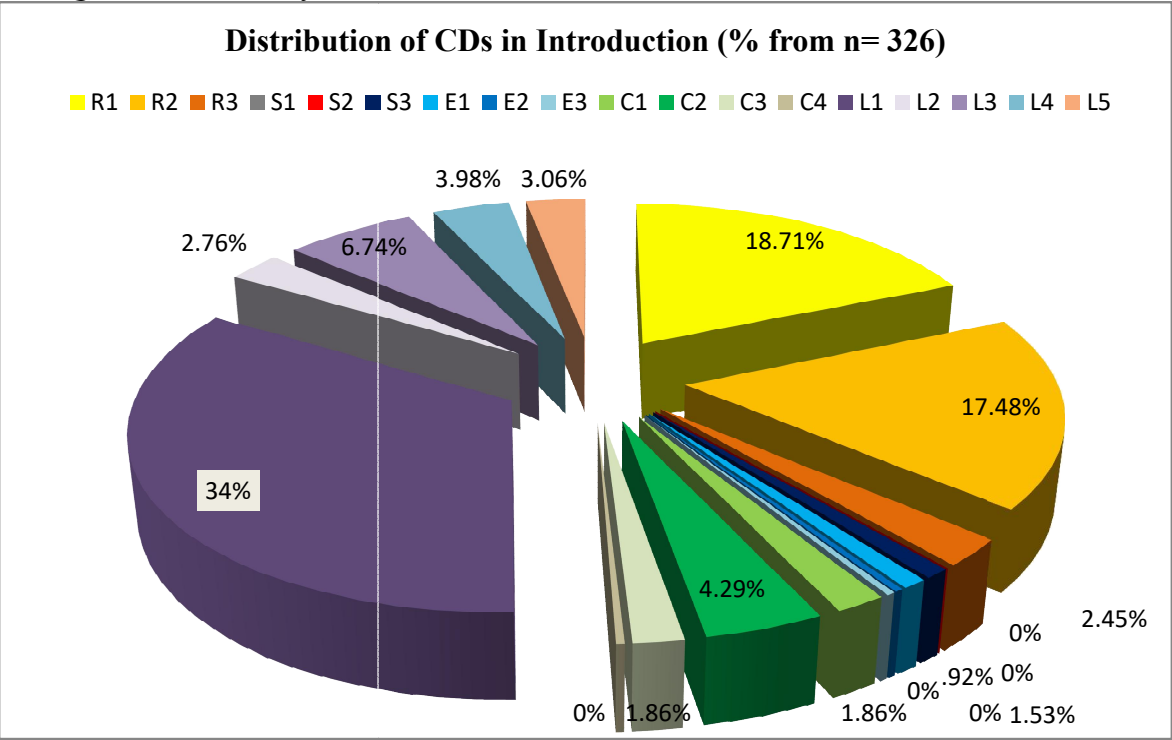


Chart C3-RQ2 further substantiates the distribution of each subcategory of CDs in Introduction of the students' essays. As can be viewed in the chart, Lexical cohesion formed the major part of cohesive use in Introduction and that too mainly by L1 (34%) of the overall use of CDs (n= 326) in Introduction. L3 (6. 74%) was another major contributor to cohesion in these texts but not as substantially as L1. Other types of Lexical cohesion were evident in the texts but not prominently. 2.76%, 3.98%, and 3.06% (of n = 326) of contribution to cohesion was made by L2, L4, and L5 respectively. Similarly, Reference was observed as contributing to cohesive effect in Introduction quite substantially. R1 and R2 were the most commonly used referential devices with 18.71% and 17.48% (n = 326) of presence in Introduction. R3, on the other hand, was not much common and was identified to be only 2.45% of the CD use in Introduction. The use of conjunctives was less than that of Lexical

cohesion and Reference but clearly more than that of Substitution and Ellipsis which were rare in Introduction. C2 was 4.29% followed by 1.86% each of C1 and C3.

C3-RQ2: Distribution of CDs in Introduction



5.8.2.1. Examples of CD use in Introduction

- I. *There are too many things that a person could have to live happy in his life.*
(Gambit)
- II. *This college teaches different majors in industrial engineering.* (Information)
- III. *Although some students oppose this argument, I agree there is too much testing in YIC.* (Proposition)

5.8.2.2. Correlation analysis of the moves in the Introduction stage

In order to see how the five moves in the Introduction stage were associated with each other in terms of the use of cohesion categories ($n = 18$), Kendall's tau_b revealed a very strong positive correlation between Evaluation and Marker, $r_t = .848, p < .01$. Gambit showed strong positive relationship with Information $r_t = .623, p < .01$, Evaluation, $r_t = .700, p < .01$ and Marker, $r_t = .653, p < .01$. Information had moderate positive association with Proposition, $r_t = .515, p < .01$ and strong positive with Evaluation, $r_t = .666, p < .01$ and Marker, $r_t = .692, p < .01$. However, Proposition was moderately positively associated with Evaluation, $r_t = .545, p < .01$ and Marker, $r_t = .450, p < .05$. The results suggested that the moves with strong relationships were likely to show an increased use of cohesion devices in the corresponding move.

5.8.3. Distribution of CDs in argument stage

Argument stage was the main part of the text spread over two or more paragraphs, and was the main storehouse of CDs, therefore. A total of 1382 CDs was tabulated in this section. C4-RQ2 illustrates this point and reveals that "Support" move of Argument had the highest percentage of CDs i.e. 72.14% of the overall use in Argument. This was followed by "Claim" (17.51%), "Restatement" (6.72%), and "Marker" (3.61%) respectively.

C4-RQ2: Distribution of CDs in the argument stage

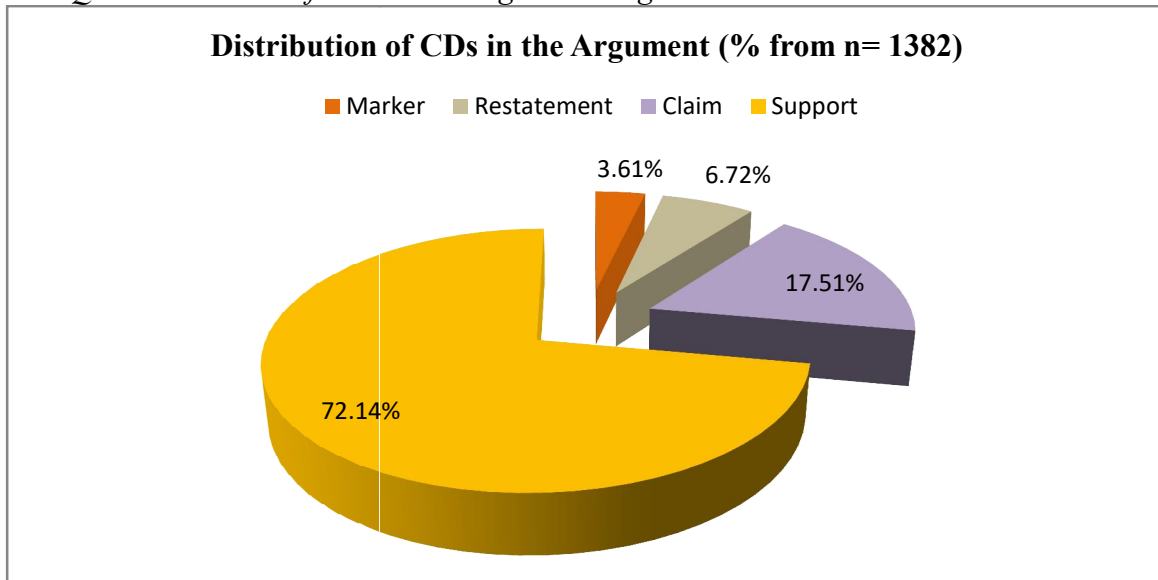


Table T3-RQ2 provides results of the descriptive statistics done for the four-move Argument stage. The figures reveal that Lexical cohesion ($M = 21.83$, $SD = 7.670$, $Mdn = 21.50$, $IQR = 12$) was the most frequent device followed by Reference ($M = 17.50$, $SD = 8.467$, $Mdn = 16.00$, $IQR = 13$), and Conjunction ($M = 5.97$, $SD = 3.316$, $Mdn = 6.00$, $IQR = 4$). Both Substitution and Ellipsis did not have very frequent presence in the four moves of the Argument stage.

T3-RQ2: Descriptive statistics for CDs in the Argument stage of the rhetorical structure

	Reference	Substitution	Ellipsis	Conjunction	Lexical Cohesion
N Valid	30	30	30	30	30
Missing	0	0	0	0	0
Mean	17.50	.20	.47	5.97	21.83
Median	16.00	.00	.00	6.00	21.50
Std. Deviation	8.467	.610	.681	3.316	7.670
IQR	13	0	1	4	12

Chart C5-RQ2 reveals the percentage results of the category use of 1382 CDs in Argument. It is evident that Lexical cohesion was the main source of CDs with 47.39% use followed by

Reference which was 38.20% and Conjunctions which were 12.95%. Substitution and Ellipsis were not substantial in terms of their percentage scores.

C5-RQ2: Category Distribution of CDs in argument stage

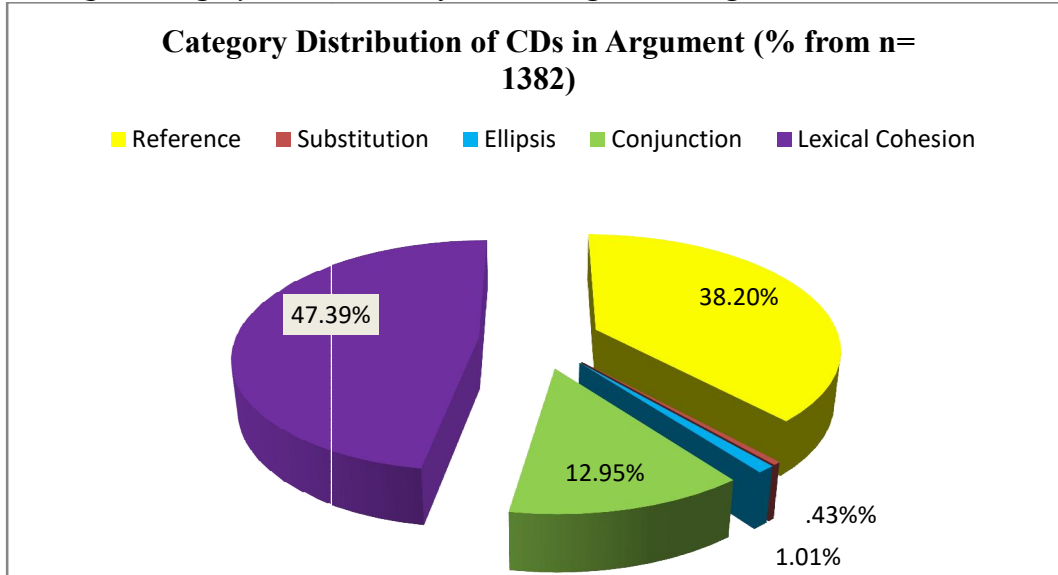
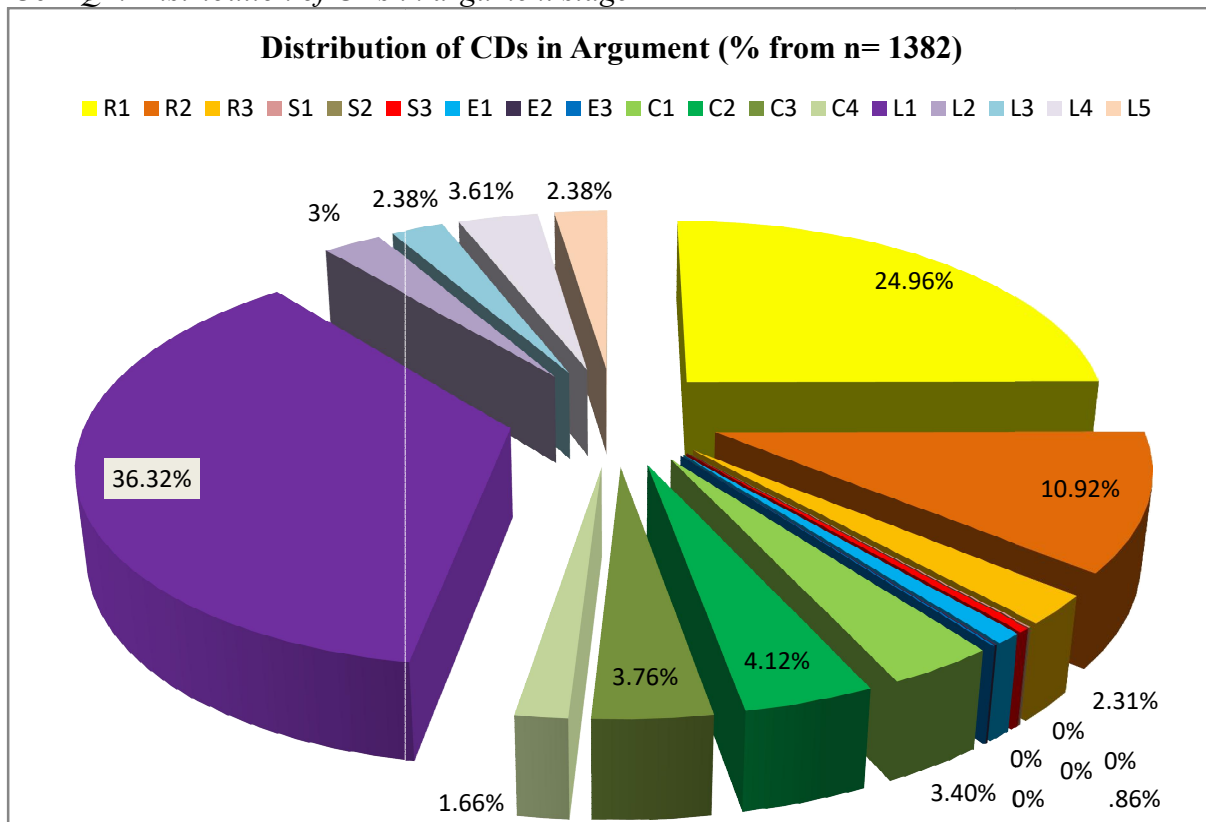


Chart C6-RQ2 presents percentage results of the individual subcategories of cohesion calculated from 1382 CDs in Argument. As is visible, L1 alone formed 36.32% of the cohesive use in Argument which indicated that the students had a high preference for this type of CD. Other types of Lexical cohesion did not figure prominently with L2, L3, L4, and L5 making only 3%, 2.38%, 3.61%, and 2.38% contribution to cohesion in Argument respectively. The case of referential cohesion was, however, slightly different from Lexical cohesion as referential devices had a better distribution across the three subcategories. R1 was the most commonly applied reference type with 24.96% use followed by R2 (10.92%) and R3 (2.31%). The scores for conjunctives except for C4 (1.66%) though not high were more evenly distributed than that of Reference and Lexical cohesion. C2, C3 and C4 formed 4.12%, 3.76%, 3.40% of conjunctive use in Argument respectively. Substitution and Ellipsis did not have noticeable percentage in regard to their use in any of the four parts of Argument.

C6-RQ2: Distribution of CDs in argument stage



5.8.3.1. Examples of CD use in the Argument stage

- I. *People* also think that people with money are not happy, *because they* are thinking about *the money* all the time and have no time for free, happy thinking.
(Restatement)
- II. our also traveling alot is a reason for *Saudi youth* to lose *thier cultural identity*.
(Claim)
- III. *For example*, if you are living in Saudi Arabia and you friend living in Somewhere you can contact *him* face to face like a real live. Also, you contact with any person in anytime. (Support)

5.8.3.2. Correlation analysis of the moves in the Argument stage

Kendall's tau_b produced moderate positive relationships between Marker and Restatement, $r_t = .448$, $p < .05$, Marker and Claim, $r_t = .461$, $p < .05$ and Marker and Support, $r_t = .453$, $p < .05$.

.05. Strong positive associations were found between Restatement and Claim, $r_t = .722$, $p < .01$ Restatement and Support, $r_t = .669$, $p < .01$ and Claim and Support, $r_t = .731$, $p < .01$.

5.8.4. Distribution of CDs in the conclusion stage

The Conclusion stage with four moves - "Marker", "Consolidation", "Affirmation", and "Close" comprised of the lowest presence of CDs (n=246) in the RS of argumentative essays written by Saud EFL students. C7-RQ2 shows that "Consolidation" and "Affirmation" were nearly evenly distributed with 38.61% and 35.36% of CDs respectively in both the sections. "Close" with 15.85% score was a little higher in CD use than "Marker" with 10.16%.

C7-RQ2: Distribution of CDs in the conclusion stage

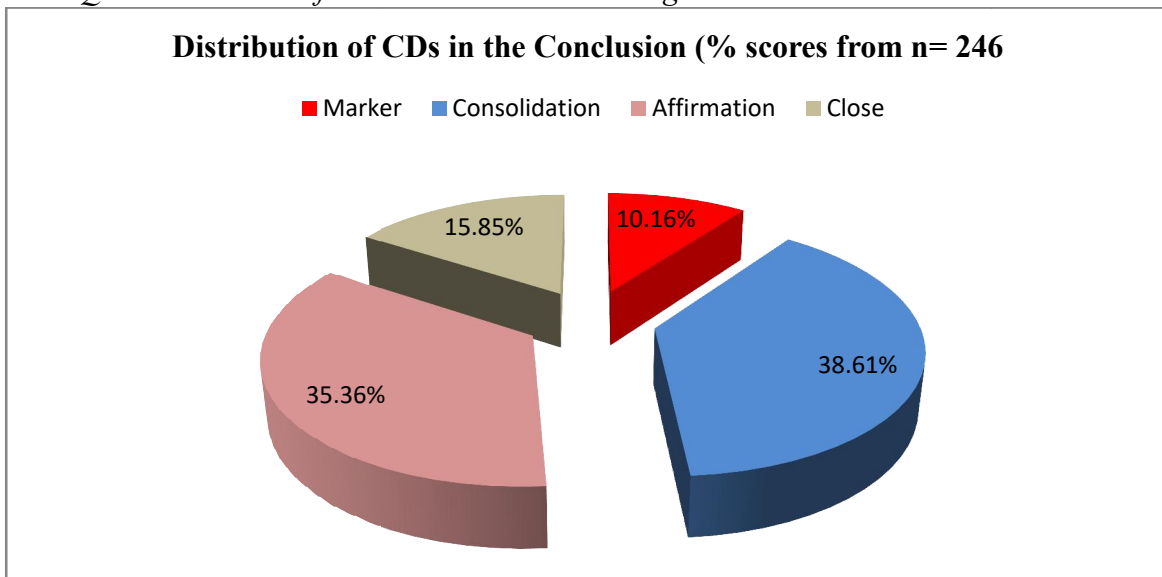


Table T4-RQ2 presents results of descriptive statistics conducted for the four-move Conclusion stage. Lexical cohesion ($M = 4.87$, $SD = 3.071$, $Mdn = 4.50$, $IQR = 4$) had the highest use which was followed by Reference ($M = 1.93$, $SD = 1.639$, $Mdn = 1.50$, $IQR = 2$), and Conjunction ($M = 1.37$, $SD = .850$, $Mdn = 1.00$, $IQR = 1$). Substitution and Ellipsis did not figure prominent in this stage of the argumentative essays.

T4-RQ2: Descriptive statistics for CDs in the Conclusion stage of the rhetorical structure

		Reference	Substitution	Ellipsis	Conjunction	Lexical Cohesion
N	Valid	30	30	30	30	30
	Missing	0	0	0	0	0
Mean		1.93	.03	constant	1.37	4.87
Median		1.50	.00		1.00	4.50
Std. Deviation		1.639	.183		.850	3.071
IQR		2	0		1	4

Chart C8-RQ2 shows the category distribution of CDs in Conclusion. The percentage scores were obtained from 226 CDs identified in four sections of Conclusion. Referential cohesion was used for 23.57% followed by conjunctives which formed 16.66% of the CD use in Conclusion. Substitution and Ellipsis were highly insignificant and percentage scores could not be calculated. Lexical cohesion occupied most of the cohesive domain in Conclusion with 59.35% of presence across the four parts of Conclusion.

C8-RQ2: Category distribution of CDs in conclusion stage

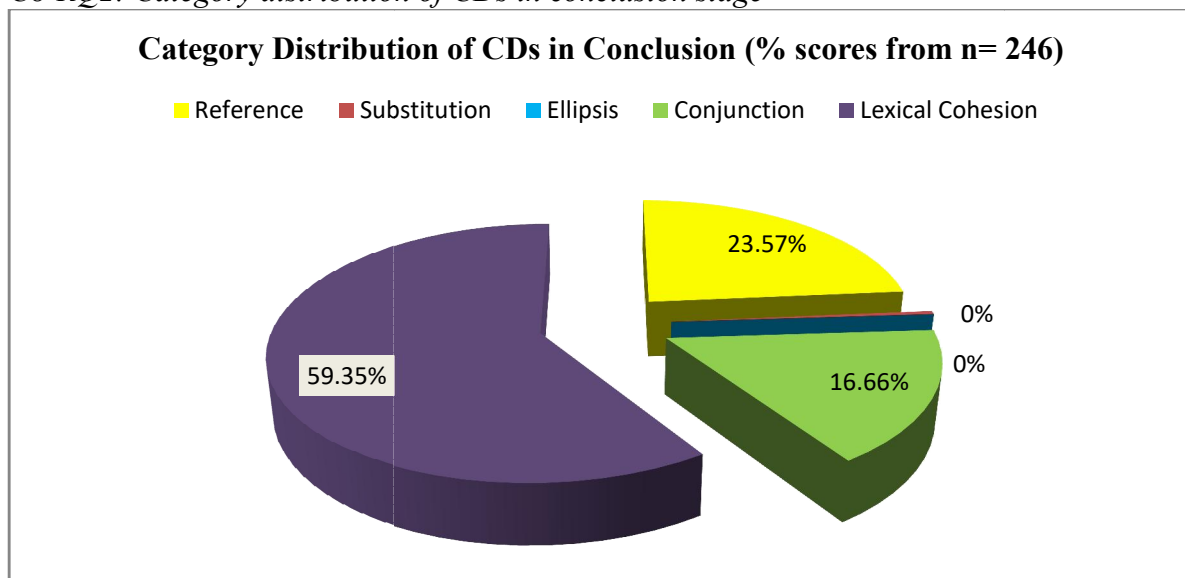
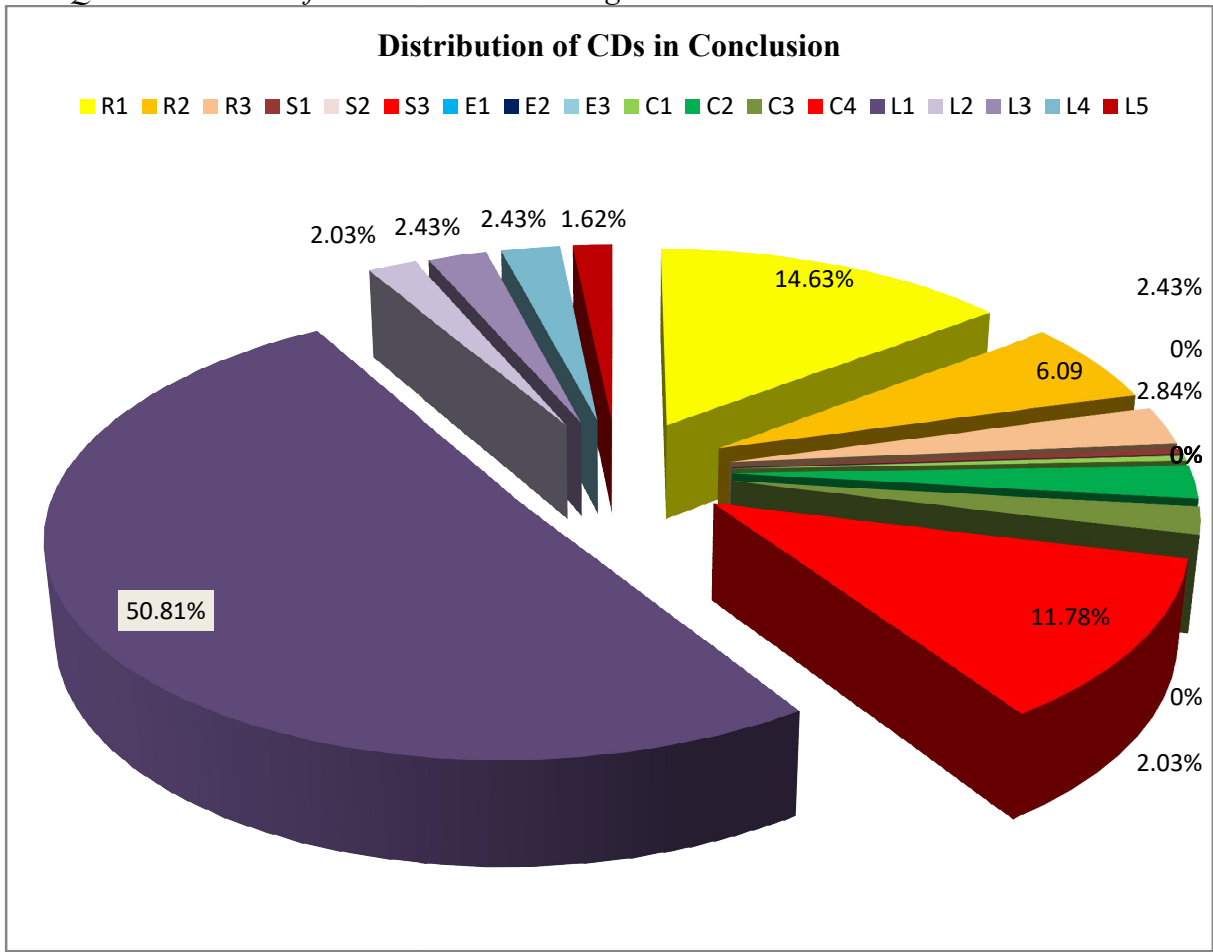


Chart C9-RQ2 illustrates the distribution of CDs across the four parts of Conclusion: "Marker", "Consolidation", "Affirmation" and "Close". R1 had the most frequent presence

among referential items with 14.63% followed by R2 at 6.09% and R3 at 2.84%. C4 appeared to be the most frequent Conjunction with a score of 11.78%. C2 received 2.43% score followed by C3 with 2.03%. C1 could not be identified in Conclusion as was the case with Substitution and Ellipsis. L1 (50.81%) was the most commonly used lexical device by the students. Other lexical devices were not found very frequent with L2, L3, L4 and L5 scoring 2.03%, 2.43%, 2.43% and 1.62% of the overall CD use (n=246) in four components of Conclusion.

C9-RQ2: Distribution of CDs in conclusion stage



5.8.4.1. Examples of CD use in the Conclusion stage

- i. increasing the number of examination will not result in positive grads or marks of students. In fact , it will decreases the performance of students on YIC.
(Consolidation)
- ii. In my opinion the number of testing is for enough to us as students and it let us know what going on, day by day week by week and so on up to the finals. (Affirmation)
- iii. So family must be careful with there children when they R1 give them a cellphone.
(Close)

5.8.4.2. Correlation analysis of the moves in the Conclusion stage

The only strong positive correlation found through Kendall's tau_b was between Affirmation and Close, $r_t = .661, p < .01$ whereas, Consolidation and Affirmation, $r_t = .535, p < .01$ and Consolidation and Close, $r_t = .501, p < .05$ were moderately positively associated.

5.9. Results for research question 3

Results for research question 3 (What are teachers and students' perceptions about teaching and learning of academic writing and cohesion in Arab EFL context?) are presented in two sections. The first section presents results of the structured questionnaires designed to gauge perceptions of the teachers and the students. Section two details teachers' responses as analyzed from their interviews. These results were also used for collation with findings of text analysis for research questions 1 and 2.

5.9.1. Structured questionnaires

This section of the chapter presents findings from the structured questionnaires that had been designed to gauge teachers' and students' perception about the learning and teaching of academic writing and cohesive devices in Arab EFL context. The analytical procedures adopted for this part of the main study deviated from the procedures for the pilot study. Following revelation of the non-normal variables in the data, Median and Inquartile Range scores were reported with the Mean and Standard Deviation scores. The percentage scores

are reported in Appendix 15. In addition, Spearman Rho was used for correlation analysis (Appendix 16, 17), and the Mann Whitney U test (Appendix 18) was used for finding out similarities and differences between the teachers and the students' perceptions. The data for the main study was based on $n=112$ for the structured questionnaires on teachers' perceptions, and $n=60$ for the structured questionnaires to measure students' perceptions. The questionnaires were designed on the five-point Likert Scale with 50 items in each. These items of the questionnaires were then categorized into six different factors or themes. Following data analysis procedures set out in Chapter 4, SPSS was used for statistical analysis of both the questionnaires. These included running Cronbach's Alpha for reliability analysis, descriptive statistics, non-parametric correlation and non-parametric variance analysis.

5.9.2. Descriptive data analysis for the survey questionnaires

The items of the questionnaires were divided into six categories namely: Teaching and learning of academic writing (TL), Arabic language and culture (ALC), Language knowledge (LK), Text organization (TO), Cohesion (COH), and Rhetorical functions (RF) (Appendix 14). The sections below present results for the reliability analysis, normality check, descriptive statistics, and non-parametric correlation and variance analysis:

5.9.3. Reliability Analysis for the survey questionnaires – Cronbach's Alpha Test

Data consistency is crucial in conducting reliable research, and therefore, Cronbach's Alpha test was applied to examine the internal consistency of the collected data. Following Sekaran (2006 p.311) that an α -value $> .60$ can permit further analysis of the data, the reliability results of my survey (Appendix 7) for both teachers' perceptions ($\alpha = .954$) and students' perceptions ($\alpha = .943$) revealed that the data was highly acceptable for the study. The α -values found for individual factors in this study TL, ALC, LK, TO, COH, and RF were .772, .660, .745, .835, .844, .943 respectively for the teachers' responses, and .847, .702, .724, .719, .830 and .918 respectively for the students'.

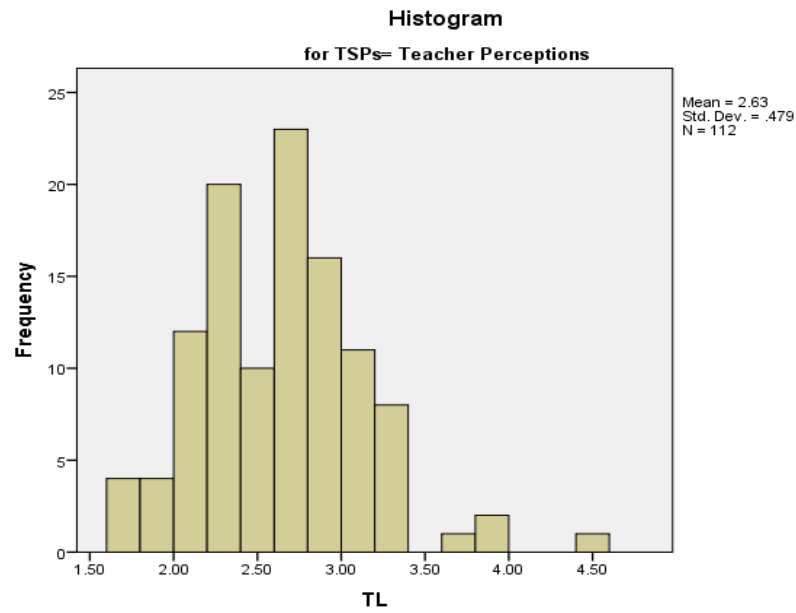
5.9.4. Normality tests for the factors on teachers and students' perceptions

A Shapiro-Wilk test ($p > .05$) (Shapiro & Wilk, 1965; Hanusz & Tarasińska, 2015) and the visual display of the histograms revealed that five out of twelve factors on both the questionnaires were not normally distributed. TL mean with skewness of .682 ($SE = .966$) and kurtosis of 1.667 ($SE = .453$), ALC mean with a skewness of .310 ($SE = .228$) and a kurtosis of .580 ($SE = .453$), and TO mean with a skewness of -.337 ($SE = .228$) and a kurtosis of -.465 ($SE = .453$) from the teachers' survey were not normally distributed. Similarly. TO mean with a skewness of .872 ($SE = .309$) and a kurtosis of .372 ($SE = .608$) and COH mean with a skewness of .700 ($SE = .309$) and a kurtosis of 1.747 ($SE = .608$) from the students' questionnaire were not normally distributed. Other factors on both the questionnaires, as illustrated in Table T1-RQ3 were approximately normally distributed.

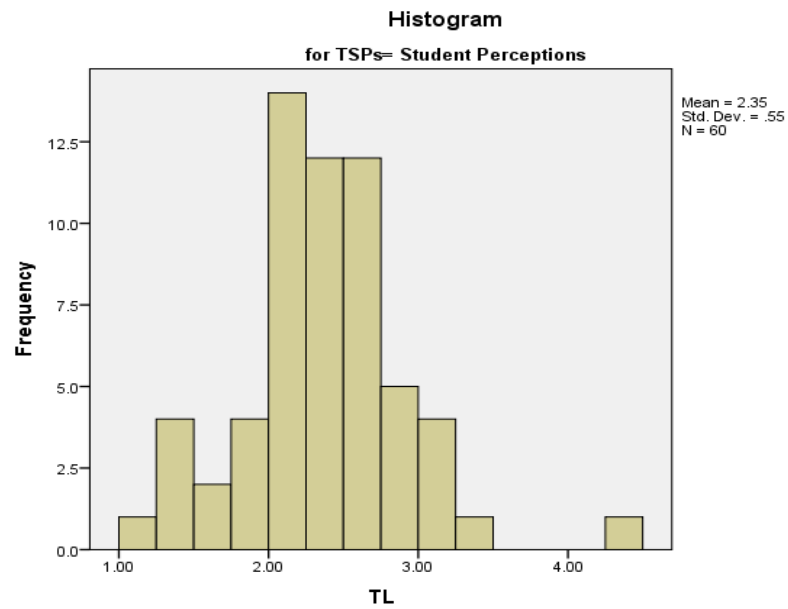
T1-RQ3: Normality test for the survey questionnaires

	Teachers' perceptions					Students' perceptions				
	Skewness (SE)	Kurtosis (SE)	Shapiro-Wilk			Skewness (SE)	Kurtosis (SE)	Shapiro-Wilk		
			Statistics	df	Sig.			Statistics	df	Sig.
TL	.682 (.228)	1.667 (.453)	.966	112	.006	.510 (.309)	2.031 (.608)	.964	60	.075
ALC	.310 (.228)	.580 (.453)	.977	112	.049	.289 (.309)	.281 (.608)	.968	60	.116
LK	.064 (.228)	-.668 (.453)	.978	112	.059	.198 (.309)	-.012 (.608)	.968	60	.114
TO	-.337 (.228)	-.465 (.453)	.938	112	.000	.872 (.309)	.372 (.608)	.916	60	.001
COH	.120 (.228)	1.145 (.453)	.977	112	.051	.700 (.309)	1.747 (.608)	.956	60	.032
RF	-.039 (.228)	-.835 (.453)	.978	112	.059	.617 (.309)	.836 (.608)	.965	60	.079

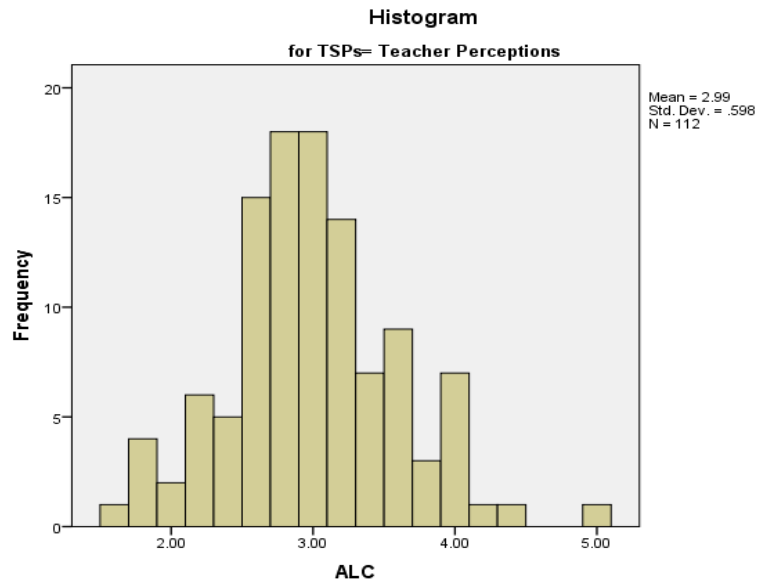
C1-RQ3: Teachers' perceptions about TL



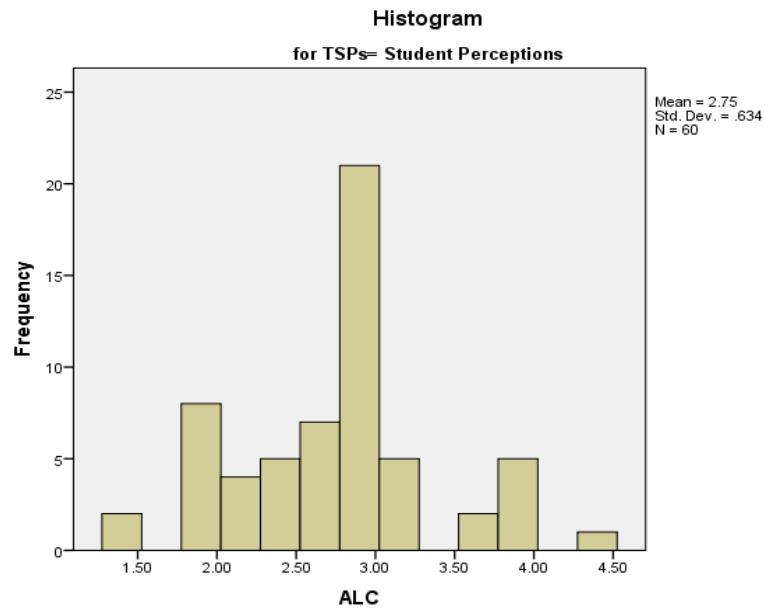
C2-RQ3: Students' perceptions about TL



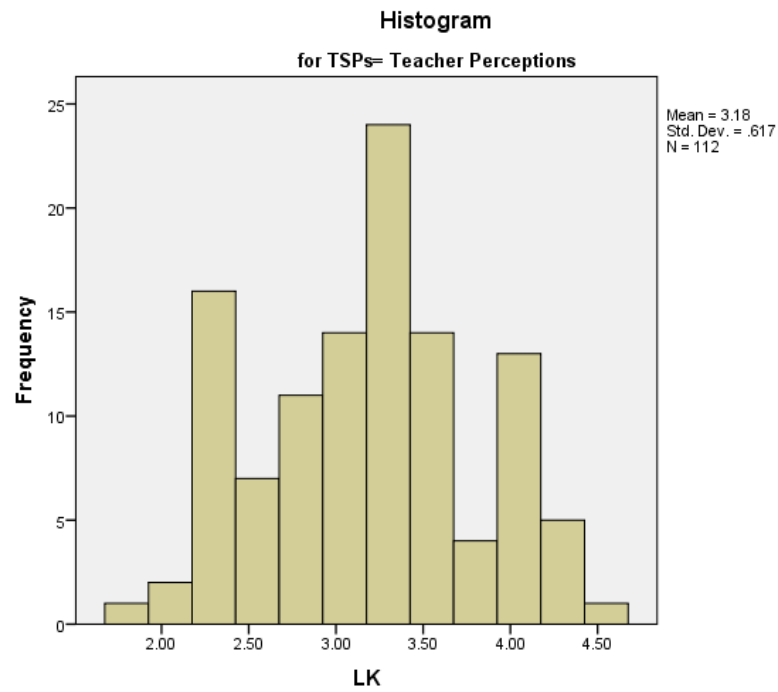
C3-RQ3: Teachers' perceptions about ALC



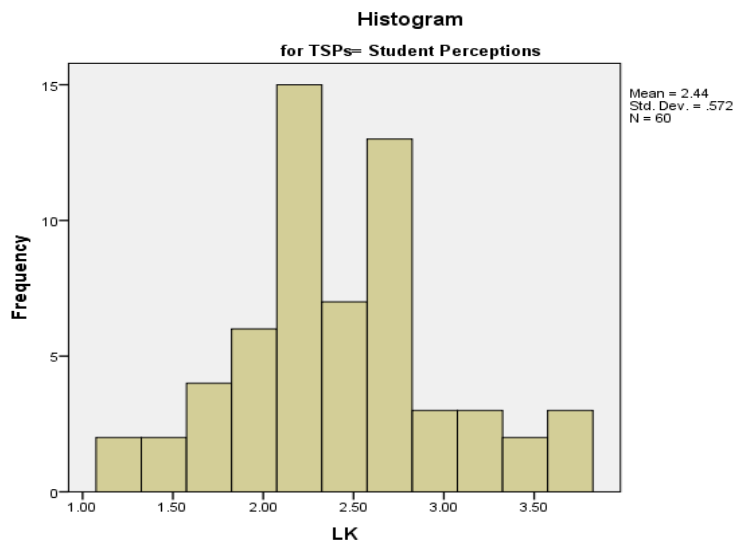
C4-RQ3: Students' perceptions about ALC



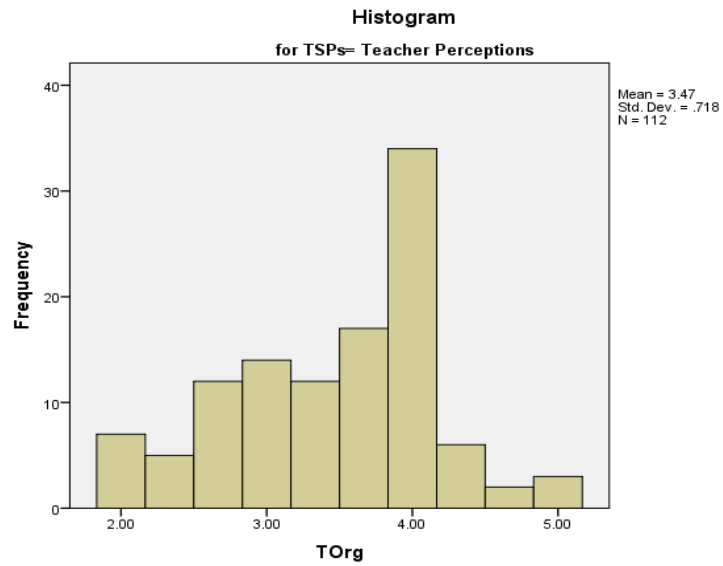
C5-RQ3: Teachers' perceptions about LK



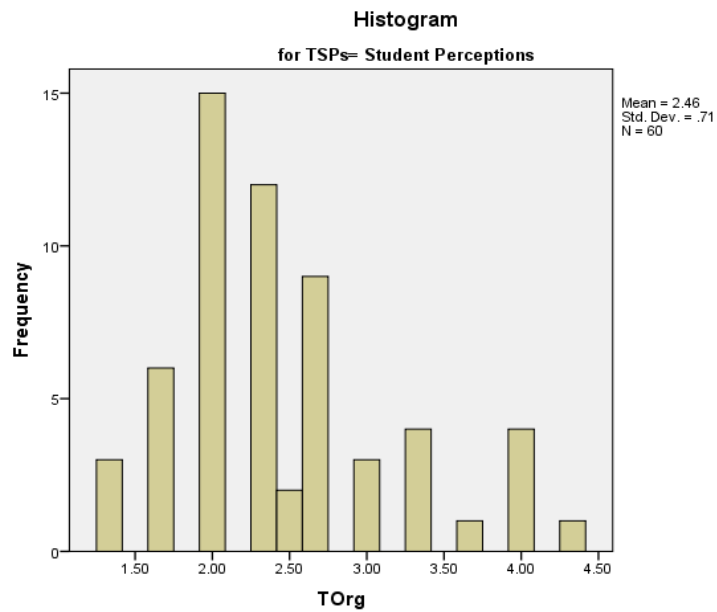
C6-RQ3: Students' perceptions about LK



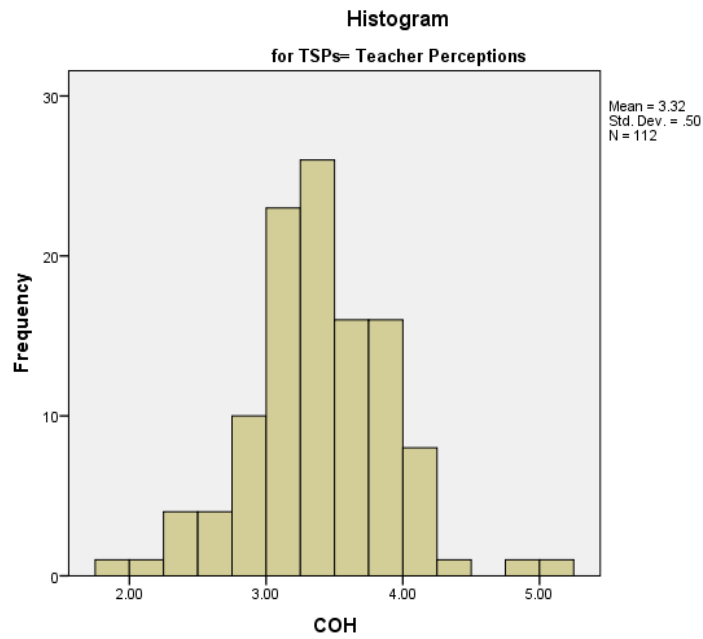
C7-RQ3: Teachers' perceptions about TO



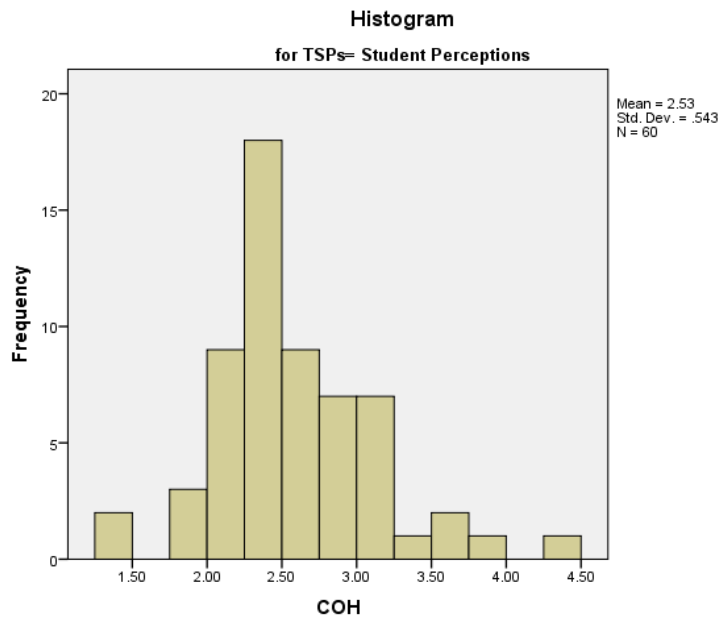
C8-RQ3: Students' perception about TO



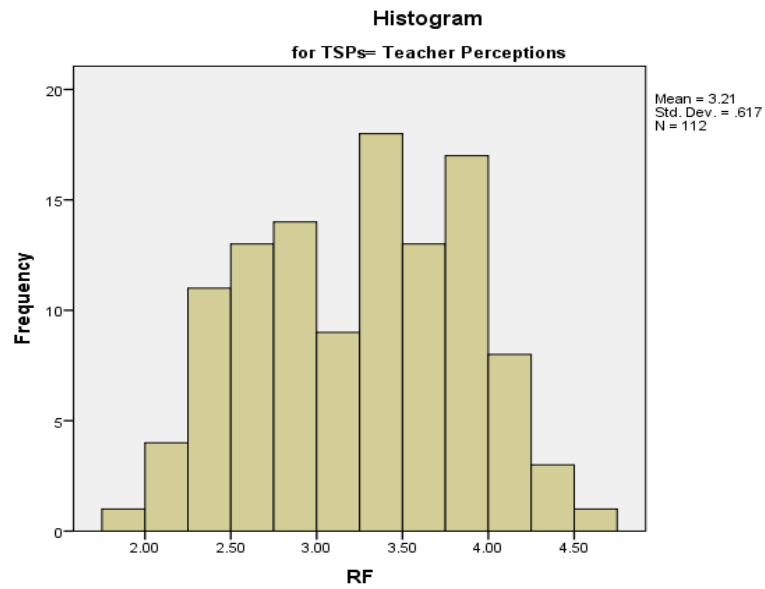
C9-RQ3: Teachers' perceptions about COH



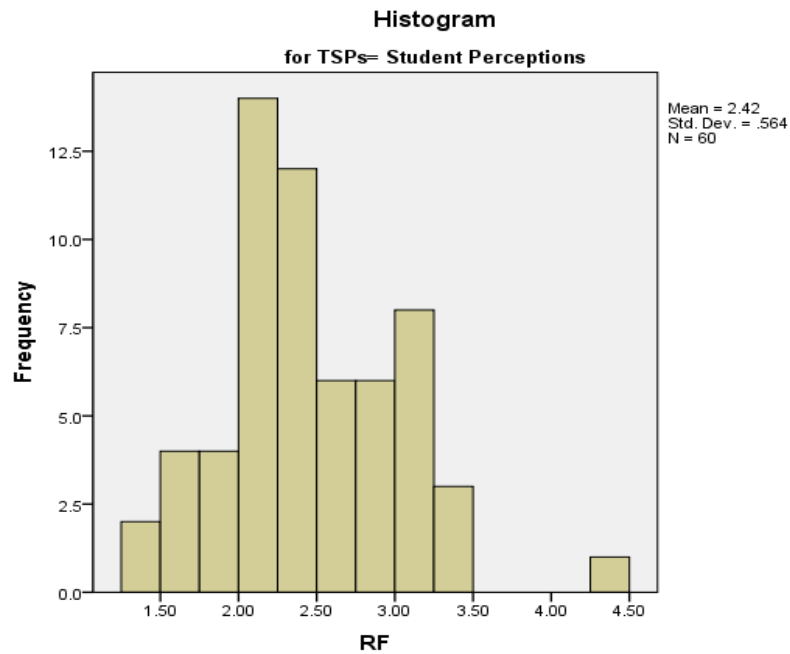
C10-RQ3: Students' perceptions about COH



C11-RQ3: Teachers' perceptions about RF



C12-RQ3: Students' perceptions about RF



I had three options in regard to the use of statistical analysis for these survey questionnaires. First, I should normalize the data using some mathematical operations as referred to in (5.6). Secondly, I could use parametric tests for the normally distributed, and non-parametric for the non-normally distributed factors. Thirdly, I could opt what I had for the Research Question 1 and 2 that when some variables on the data set have normal distribution and some non-normal, non-parametric tests can be used (van der Helm-van Mil et. al., 2008). I decided to chose the last for analysis of both the teachers and the students' survey questionnaires for two main reasons. Non-parametric tests are not robust to assumptions of data normality and using them would help me collect a homogeneous set of results from the data. Secondly, homogeneity of variance is an obligatory assumption for parametric tests such as the Independent Sample t-Test or ANOVA. While, the Mann Whitney U - a non-parametric equivalent of the Independent Sample t-Test - which I used for both the text and survey analysis does not have any such conditions.

For both the survey questionnaires, I proposed to use descriptive statistics reporting mean (M) and standard deviation (SD) as well as median (Mdn) and interquartile range (IQR) scores for both normally and non-normally distributed variables. The choice of reporting M, SD, Mdn, and IQR was adopted to give a fuller account of the descriptive statistics. As was illustrated in the results, many items had a similar Mdn score but noticeable differences in the mean scores. It was assumed that the mean scores especially for the normally distributed factors or survey items would give an organized results of the scales from the highest to the lowest agreement. Appendix 15 furnishes the percentage scores for the teachers' and the students' perceptions. In addition to the descriptive statistics, Spearman's rho (r_s) was used for correlation analysis and the Mann Whitney U test was used to gauge the differences between the teachers' and the students' perceptions. All these analyses were done through SPSS except for the effect size (r) of the Mann Whitney U - an option not available in the software. Hence, following Grissom and Kim (2012), the effect size (r) was computed manually using a scientific calculator with the following formula:

$$r = Z/\sqrt{n}$$

The sections below present results for the teachers and the students' surveys. Test statistics for correlation analysis can be found in Appendix 16 for teachers' survey and Appendix 17 for students'. The Mann Whitney U results for both the surveys are reported in Appendix 18.

5.9.5. Descriptive data analysis for all the factors on survey questionnaires

The results of the descriptive analysis indicated that the teachers' perceptions had a higher proportion of agreement compared with the students' who appeared to have either disagreed or stayed neutral with most items on each factor of the questionnaire. Individually, TO Mean ($TO\ M = 3.46$; $SD = 0.71$; $Mdn = 4.00$; $IQR = 1$) on teachers' perceptions received the highest level of agreement, while TL Mean ($M = 2.627$; $SD = 0.478$; $Mdn = 2.00$; $IQR = 1$) got the highest proportion of neutral or disagreed responses. On the other hand, LC Mean ($M = 2.747$; $SD = .633$; $Mdn = 2.80$; $IQR = .62$) and TL Mean ($M = 2.353$; $SD = .549$; $Mdn = 2.42$; $IQR = .62$) from the students' questionnaire had the highest and the lowest level of agreed responses. Table T2-RQ3 illustrates the differences between the teachers and students' beliefs through descriptive statistics:

T2-RQ3: Descriptive statistics for each of the factors

	Teachers' Perceptions (N = 112)				Students' Perceptions (N = 60)			
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR
TLMean	2.627	.478	2.00	1	2.353	.549	2.42	.62
LCMean	2.994	.598	3.00	2	2.747	.633	2.80	.60
LKMean	3.183	.617	3.00	2	2.441	.571	2.40	.60
TOMean	3.467	.717	4.00	1	2.455	.709	2.33	.67
COHMean	3.323	.499	3.50	1	2.528	.543	2.42	.59
RFMean	3.210	.616	3.00	1.50	2.421	.564	2.28	.79

5.9.5.1. Correlation analysis for mean scores of all the factors

Spearman's rho (r_s) revealed statistically non-significant associations between the same factors on both the surveys such as that between the TL Mean in the two questionnaires. However, there were weak, moderate and strong positive inter-factor correlations between the mean scores on both the questionnaires. TL Mean was strongly positively correlated with RF Mean on both teachers' survey, $r_s = .616$, $p < .01$, and students' survey, $r_s = .765$, p

$< .01$. Similarly, there was strong positive association, $r_s = .657, p < .01$ and $r_s = .674, p < .01$ respectively between COH Mean and RF Mean on both the questionnaires. Other associations were either positively moderate or weak or non-significant statistically, and differed in their effect size between the two surveys. The results suggested that the mean scores for a factor with significant association were likely to be followed by a corresponding increase in the corresponding factor on the same scale of agreement or neutrality or disagreement.

5.9.5.2. Nonparametric variance analysis for all the factors

Mann-Whitney U was applied to compare the perceptions of the teachers and the students. U-values for all the factors TL, ALC, LK, TO, COH, and RF were found to be statistically significant $U = 2319.50 (Z = -3.34), p < 0.01, U = 4391.00 (Z = -2.58), p < 0.05, U = 3107.00 (Z = -6.72), p < 0.01, U = 2950.00 (Z = -7.26), p < 0.01, U = 2709.50 (-7.98), p < 0.01$, and $U = 2990.50 (Z = -7.06), p < 0.01$ respectively. The difference between the teachers and students' groups was small for TL ($r = -.25$) and ALC ($r = -.19$), moderate for LK ($r = -.51$), TO ($r = -.55$) and RF ($r = -.53$), and large for COH ($r = -.60$).

T3-RQ3: Mann Whitney U Test Statistics for all the factors

	TL	ALC	LK	TO	COH	RF
Mean	2.53	2.90	2.92	3.11	3.04	2.93
SD	.519	.620	.697	.86	.639	.706
Median	2.53	2.80	2.90	3.00	3.12	2.90
IQR	.62	.60	1.00	1.67	.88	1.11
Mann Whitney U	2319.500	4391.000	3107.000	2950.000	2709.500	2990.500
Z	-3.34	-2.58	-6.72	-7.26	-7.98	-7.06
P	.001	.010	.000	.000	.000	.000
R	-0.25	-0.19	-0.51	-0.55	-0.60	-0.53

5.9.6. Teaching & Learning of Academic Writing (TL)

Table T4-RQ3 presents descriptive statistics for TL with 13 items on both questionnaires. There were only 4 items on teachers' survey with $M = 3.0$ or above, and none on the students'. The results indicated that most of the teacher and student respondents either remained neutral or disagreed with most of the items. From the teachers' response, the

highest level of agreement 48% was found for TL9 "*Students are motivated enough to learn writing skills for academic purpose*" ($M = 3.23$; $SD = 1.070$; $Mdn = 3.00$; $IQR = 2$), while the highest proportions of disagreement (91% and 87.5%) were for TL10 "*Academic writing is useful to students' present and future needs*" ($M = 1.71$; $SD = .885$; $Mdn = 2.00$; $IQR = 1$) and for TL3 "*Students feel gratified when appreciated for their writing skills*" ($M = 1.94$; $SD = .797$; $Mdn = 2.00$; $IQR = 1$) respectively. From the students' survey (Appendix 13) the statements, TL1 "*I can write in English for academic purposes quite often*" ($M = 2.17$; $SD = .717$; $Mdn = 2.00$; $IQR = 1$), TL2 "*I can also write in English for non-academic purposes*" ($M = 2.12$; $SD = .867$; $Mdn = 2.00$; $IQR = 1$), and TL5 "*I can work independently*" ($M = 2.19$; $SD = .955$; $Mdn = 2.00$; $IQR = 1$) showed 73%, 72%, and 73% disagreement.

T4-RQ3: Descriptive statistics for TL

TL Factor	Teachers' Perceptions (N = 112)				Students' Perceptions (N = 60)			
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR
TL1	3.05	1.138	3.00	2	2.17	.717	2.00	1
TL2	2.88	1.115	2.00	2	2.12	.867	2.00	1
TL3	1.94	.797	2.00	1	2.58	.951	3.00	1
TL4	2.35	.973	2.00	1	2.40	.867	2.00	1
TL5	3.08	.992	3.00	2	2.19	.955	2.00	1
TL6	2.05	.862	2.00	0	2.22	.930	2.00	0
TL7	3.01	.895	3.00	2	2.30	.850	2.00	1
TL8	2.70	1.005	2.00	1	2.53	.791	2.00	1
TL9	3.23	1.070	3.00	2	2.52	.833	2.50	1
TL10	1.71	.885	2.00	1	2.42	1.154	2.00	1
TL11	2.76	.897	3.00	1	2.35	.917	2.00	1
TL12	2.59	.888	2.00	1	2.36	.886	2.00	1
TL13	2.78	.828	3.00	1	2.41	.833	2.00	1

5.9.6.1. Correlation analysis of TL

There was no evidence of strong positive association between the factors on teachers' survey. Spearman's rho (r_s) found weak positive associations between different items on the TL factor such as that between TL2 and TL13 $r_s = .184$, $p < .05$ and TL4 and TL11 $r_s = .173$, $p < .05$. There were a few moderate positive relations also as between TL1 and TL11 $r_s = .407$, $p < .01$, TL3 and TL10 $r_s = .419$, $p < .01$, TL5 and TL9 $r_s = .441$, $p < .01$, TL8 and TL9 $r_s = .428$, $p < .01$, and TL9 and TL11 $r_s = .505$, $p < .01$. On the other hand, the only strong positive relationship observed in students' survey (Appendix 17) was between

TL12 and TL13 $r_s = .612, p < .01$. Other correlations were either weak or moderate such as that between TL3 and TL13 $r_s = .262, p < .05$ and TL9 and TL10 $r_s = .576, p < .01$. The results indicated that the survey items with significant correlations would increase according to their effect size in the corresponding item.

5.9.6.2. Mann Whitney U results for TL

The Mann Whitney test results for the individual items on the TL factor were found statistically significant except for TL4 $U = 3104.00$ ($Z = -.701$), $p = .48$, $r = -.05$; TL6 $U = 2945.00$ ($Z = -1.208$), $p = .22$, $r = -.09$; TL8 $U = 3072.50$ ($Z = -.698$), $p = .48$, $r = -.05$ and TL12 $U = 2884.00$ ($Z = -1.38$), $p = .16$, $r = -.10$. The statistically significant items showed small to moderate differences between the teachers and the students in their perceptions about the respective item i.e. TL1 ($r = -.37$), TL2 ($r = -.31$), TL3 ($r = -.35$), TL5 ($r = -.40$), TL7 ($r = -.36$), TL9 ($r = -.31$), TL10 ($r = -.33$), TL11 ($r = -.20$), TL13 ($r = -.20$).

5.9.7. Arabic Language and culture (ALC)

The second factor ALC comprised of five items with ALC1 “*Writing in English is the same as writing in Arabic*” receiving 92% agreement ($M = 4.28$; $SD = .713$; $Mdn = 4.00$; $IQR = 1$) on teachers' survey followed by 42% agreement for ALC5 “*Arab culture values critical judgment*” ($M = 3.12$; $SD = 1.055$; $Mdn = 3.00$; $IQR = 2$). Other items had a higher percentage of disagreement or neutrality. ALC1 “*I can say that writing in English is the same as writing in Arabic*” ($M = 3.67$; $SD = .896$; $Mdn = 4.00$; $IQR = 1$) on the students' survey also had a higher percentage (65) of agreement. Other items with a mean score of less than 3.00 had a higher percentage of disagreement or neutral response. Table T5-RQ3 furnishes the descriptive statistics for each of the items on ALC factor.

T5-RQ3: Descriptive statistics for ALC

ALC Factor	Teachers' Perceptions (N =112)				Students' Perceptions (N = 60)			
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR
ALC1	4.28	.713	4.00	1	3.67	.896	4.00	1
ALC2	2.04	.734	2.00	0	2.56	.952	3.00	1
ALC3	2.54	1.021	2.00	1	2.45	.891	2.00	1
ALC4	3.00	1.018	3.00	2	2.50	.873	2.00	1
ALC5	3.12	1.055	3.00	2	2.57	1.079	3.00	1

5.9.7.1. Correlation analysis of ALC

The correlation results for the teachers' survey revealed that ALC3 had a moderate positive association with ALC4 $r_s = .554, p < .01$ and strong positive with ALC5 $r_s = .604, p < .01$. ALC4 and ALC5 were strongly correlated at $r_s = .775, p < .01$. On the other hand, students' survey results (Appendix 17) showed strong positive relationships between ALC3 and ALC4 $r_s = .622, p < .01$, ALC3 and ALC5 $r_s = .751, p < .01$, and ALC4 and ALC5 $r_s = .745, p < .01$. The results demonstrated that an increase in an item response was likely to be replicated by a visible increase in the corresponding item on a similar scale or rating.

5.9.7.2. Mann Whitney U for ALC

Four out of five items on the ALC factor revealed statistically significant results ALC1 $U = 2065.50 (Z = -4.563), p < .01, r = -0.34$, ALC2 $U = 2228.00 (Z = -3.846), p < .01, r = -.29$; ALC4 $U = 2394.00 (Z = -3.178), p < .01, r = -.24$ and ALC5 $U = 2440.50 (Z = -3.062), p < .01, r = -.23$.

5.9.8. Language Knowledge (LK)

Table T6-RQ3 provides the information about the Mean and Standard deviation of each of the 5 statements of “Language Knowledge” factor on both surveys. 75% of the teacher respondents submitted their agreement for LK1 “*Students have sufficient vocabulary to help them write in English*” ($M = 3.74; SD = .850; Mdn = 4.00; IQR = 1$), and 54% disagreement for LK2 “*Students use knowledge of grammar to write correctly in English*” ($M = 2.75; SD = .948; Mdn = 2.00; IQR = 2$). Student respondents mostly either disagreed or neutral. LK1 “*I can say I have sufficient vocabulary to help me write in English*” showed 58% disagreement ($M = 2.47; SD = .897; Mdn = 2.00; IQR = 1$), while LK2 “*I can use knowledge of grammar to write correctly in English*” had 52% disagreement and 37% neutral response ($M = 2.68; SD = .730; Mdn = 3.00; IQR = 1$).

T6-RQ3: Descriptive statistics for LK

LK Factor	Teachers' Perceptions (N = 112)				Students' Perceptions (N = 60)			
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR
LK1	3.74	.850	4.00	1	2.47	.897	2.00	1
LK2	2.75	.948	2.00	2	2.68	.730	3.00	1
LK3	3.28	.922	3.00	2	2.57	.745	3.00	1
LK4	3.18	.965	3.00	2	2.28	.865	2.00	1
LK5	2.97	.977	3.00	2	2.22	.804	2.00	1

5.9.8.1. Correlation analysis of LK

The Spearman rho correlation results for teachers' perceptions were found positively significant showing weak, moderate and strong association between LK1 and LK2 $r_s = .157$, $p < .05$, LK1 and LK5 $r_s = .372$, $p < .01$, LK2 and LK3 $r_s = .235$, $p < .01$, LK3 and LK4 $r_s = .515$, $p < .01$, LK3 and LK5 $r_s = .457$, $p < .01$, and LK4 and LK5 $r_s = .709$, $p < .01$. The students' survey results revealed weak and moderate relationships only such as that between LK1 and LK3 $r_s = .302$, $p < .05$, LK1 and LK4 $r_s = .337$, $p < .01$, LK1 and LK5 $r_s = .307$, $p < .05$ and LK3 and LK5 $r_s = .306$, $p < .05$, and between LK1 and LK4 $r_s = .487$, $p < .01$, LK3 and LK4 $r_s = .484$, $p < .01$, and LK4 and LK5 $r_s = .493$, $p < .01$. The results indicated that the factor items were significantly correlated so that an increase on an item rating had either minimal or moderate to strong chances of corresponding increase on a similar rating for the corresponding item on the factor.

5.9.8.2. Mann Whitney U results for LK

The LK factor also had one statistically non-significant item LK2 $U = 3268.50$ ($Z = -.021$), $p = .98$, $r = -.07$. Mann Whitney U results for LK1 $U = 1087.50$ ($Z = -7.597$), $p < .01$, $r = -.57$; LK3 $U = 1974.50$ ($Z = -4.672$), $p < .01$, $r = -.35$; LK4 $U = 1752.50$ ($Z = -5.335$), $p < .01$, $r = -.40$; and LK5 $U = 2023.00$ ($Z = -4.466$), $p < .01$, $r = -.34$ revealed that there were moderate level differences between teachers and students' beliefs about the responded item.

5.9.9. Text Organization (TO)

The factor Text Organization with three statements on it showed a visible differences between the mean scores of the two surveys. The teacher respondents showed a higher percentage of agreement (47%) for TO1 "*Students know how to write different types of*

paragraphs" ($M = 3.22$; $SD = .898$; $Mdn = 3.00$; $IQR = 2$), 65% for TO2 "Students know how to write cohesive and coherent paragraphs" ($M = 3.64$; $SD = .748$; $Mdn = 4.00$; $IQR = 1$), and 63% for TO3 "Students know how to write argumentative essays" ($M = 3.55$; $SD = .919$; $Mdn = 4.00$; $IQR = 1$). Student respondents, on the other hand, showed 68% disagreement for TO1 "I can write different types of paragraphs" ($M = 2.31$; $SD = .951$; $Mdn = 2.00$; $IQR = 1$), 48% for TO2 "I can write cohesive and coherent paragraphs" ($M = 2.47$; $SD = .883$; $Mdn = 3.00$; $IQR = 1$) and 55% for TO3 "I can write argumentative essays" ($M = 2.58$; $SD = .814$; $Mdn = 2.00$; $IQR = 1$).

T7-RQ3: Descriptive analysis of TO

TO Factor	Teachers' Perceptions (N = 112)				Students' Perceptions (N = 60)			
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR
TO1	3.22	.898	3.00	2	2.31	.951	2.00	1
TO2	3.64	.748	4.00	1	2.47	.883	3.00	1
TO3	3.55	.919	4.00	1	2.58	.814	2.00	1

5.9.9.1. Correlation analysis of TO

The Spearman correlation (r_s) results for the teachers' questionnaire (Appendix 16) were found positively significant showing strong association between TO1 and TO2 $r = .617, p < .01$, TO1 and TO3 $r = .613, p < .01$, and TO2 and TO3 $r = .675, p < .01$. For the students' perceptions, the relationship of TO1 with TO2 and TO3 was moderate positive $r_s = .446, p < .01$ and $r_s = .414, p < .01$ respectively, and positively weak between TO2 and TO3, $r_s = .354, p < .01$. The results indicated that the factor items were significantly positively correlated so that an increase on an item rating had strong chances of increase on a similar rating for the corresponding item on the factor.

5.9.9.2. Mann Whitney U results for TO

The factor TO showed statistically significant results with moderate effect size for TO1, $U = 1636.50$ ($Z = -5.688$), $p < .01$, $r = -.43$; TO2, $U = 1070.00$ ($Z = -7.516$), $p < .01$, $r = -.57$; and TO3, $U = 1489.50$ ($Z = -6.196$), $p < .01$, $r = -.47$.

5.9.10. Cohesion (COH)

Survey results for this factor revealed visible differences between the teachers and the students' beliefs in terms of the mean scores. The highest proportion of agreement (64%) in the teachers' survey was found in COH5 "*Students make appropriate use of collocations*" showed 64% agreement ($M = 3.60$; $SD = .741$; $Mdn = 4.00$; $IQR = 1$), while COH1 "*Students make appropriate use of pronouns*" had the highest level of disagreement (48%) ($M = 2.77$; $SD = .831$; $Mdn = 3.00$; $IQR = 1$). Students' survey results, however, mostly showed disagreed or neutral responses such as COH5 "*I can make appropriate use of collocations*" ($M = 2.77$; $SD = .789$; $Mdn = 3.00$; $IQR = 1$) with 30% disagreement and 58% neutral response followed by COH8 "*I can use ellipsis (omission of a word, phrase or clause)*" ($M = 2.68$; $SD = .730$; $Mdn = 3.00$; $IQR = 1$) with 41% disagreement and 47% neutral response. Table T8-RQ3 shows the descriptive statistics for each of the statements of Cohesion factor.

T8-RQ3: Descriptive analysis of COH

COH Factor	Teachers' Perceptions (N = 112)				Students' Perceptions (N = 60)			
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR
COH1	2.77	.831	3.00	1	2.47	.821	2.00	1
COH2	3.31	.794	3.00	1	2.38	.825	2.00	1
COH3	3.47	.751	4.00	1	2.45	.872	2.00	1
COH4	3.10	.934	3.00	2	2.60	.848	2.50	1
COH5	3.60	.741	4.00	1	2.77	.789	3.00	1
COH6	3.27	.852	3.00	1	2.40	.848	2.00	1
COH7	3.58	.882	4.00	1	2.47	.897	2.00	1
COH8	3.50	.971	4.00	1	2.68	.730	3.00	1

5.9.10.1. Correlation analysis of COH

Spearman rho (r_s) for teachers' survey revealed that only COH2 and COH3, $r = .679$, $p < .01$ had a strong positive correlation. Other significant positive associations found ranged from weak to moderate such as between COH4 and COH6, $r = .195$, $p < .05$, between COH1 and COH7, $r = .260$, $p < .01$, COH1, between COH2, $r = .448$, $p < .01$, and between COH5 and COH6, $r = .515$, $p < .01$. The only strong positive correlation for students' survey (Appendix 17) found was between COH1 and COH3, $r = .633$, $p < .01$. COH1 and COH8, $r_s = .294$, $p < .05$, COH4 and COH8, $r_s = .258$, $p < .05$, and COH5 and COH8, $r_s = .266$, $p < .05$ had weak positive association whereas, COH2 and COH3, $r_s = .540$, $p < .01$, COH3 and COH4, $r_s = .509$, $p < .01$, COH4 and COH5, $r_s = .552$, $p < .01$ and COH6 and COH7, $r_s = .524$, $p < .01$ showed moderate positive relationship. The results revealed that there were weak, moderate and strong chances of a perception on a scale being increased with an increase on a similar scale in the corresponding item on the COH factor.

5.9.10.2. Mann Whitney U results for COH

Except for COH1 which was statistically not significant, COH2 $U = 1481.500$ ($Z = -6.344$), $p < .01$, $r = -.48$; COH3 $U = 1280.00$ ($Z = -6.919$), $p < .01$, $r = -.53$; COH4 $U = 2396.50$ ($Z = -3.181$), $p < .01$, $r = -.24$; COH5 $U = 1516.50$ ($Z = -6.343$), $p < .01$, $r = -.48$; COH6 $U = 1676.00$ ($Z = -5.611$), $p < .01$, $r = -.42$; COH7 $U = 1313.00$ ($Z = -6.736$), $p < .01$, $r = -.51$; and COH8 $U = 1625.50$ ($Z = -5.667$), $p < .01$, $r = -.43$ were found statistically significant and revealed small to moderate effect size.

5.9.11. Rhetorical Functions (RF)

The last factor of the survey questionnaires had 16 statements. Table T9-RQ3 presents descriptive statistics for the factor. The mean scores of the teachers' survey were higher than the students'. 63% of the teacher respondents agreed or strongly agreed with RF1 "*Students use counter arguments while writing in English*" ($M = 3.54$; $SD = .925$; $Mdn = 4.00$; $IQR = 1$), 59% with RF4 "*Students write logically that appeals to the reader*" ($M = 3.49$; $SD = .893$; $Mdn = 4.00$; $IQR = 1$). However, items such as RF2 "*Students express problems related to the topic*" ($M = 2.75$, $SD = .900$; $Mdn = 2.00$; $IQR = 2$), and RF3 "*Students write solution to these problems*" ($M = 2.96$, $SD = .939$; $Mdn = 3.00$; $IQR = 2$) showed 51%, 39% disagreement respectively. From the students' survey, RF10 "*I can develop independent opinions*" ($M = 2.15$; $SD = .887$; $Mdn = 2.00$; $IQR = 0$) had the highest percentage (76%) of disagreement on the factor followed by 67% for RF9 "*I can use examples to substantiate my point of view*" ($M = 2.27$; $SD = .756$; $Mdn = 2.00$; $IQR = 1$), and 65% for RF6 "*I can be suggestive in my expression*" ($M = 2.34$; $SD = .863$; $Mdn = 2.00$; $IQR = 1$).

T9-RQ3: Descriptive analysis of RF

RF Factor	Teachers' Perceptions (N = 112)				Students' Perceptions (N = 60)			
	Mean	SD	Mdn	IQR	Mean	SD	Mdn	IQR
RF1	3.54	.925	4.00	1	2.57	.745	3.00	1
RF2	2.75	.900	2.00	2	2.28	.865	2.00	1
RF3	2.96	.939	3.00	2	2.22	.804	2.00	1
RF4	3.49	.893	4.00	1	2.40	.785	2.00	1
RF5	3.26	.902	3.00	2	2.52	.903	2.00	1
RF6	3.27	.863	3.00	1	2.34	.863	2.00	1
RF7	3.25	.995	4.00	2	2.42	.907	2.00	1
RF8	3.28	.983	4.00	2	2.34	.902	2.00	1
RF9	3.03	.958	3.00	2	2.27	.756	2.00	1
RF10	2.91	.968	3.00	2	2.15	.887	2.00	0
RF11	3.13	.902	3.00	2	2.35	.899	2.00	1
RF12	3.18	.872	3.00	2	2.56	.933	3.00	1
RF13	3.18	.855	3.00	2	2.52	.813	2.00	1
RF14	3.35	.747	3.00	1	2.59	.879	2.00	1
RF15	3.35	.868	4.00	1	2.66	.890	2.00	1
RF16	3.23	.981	3.00	2	2.57	.871	2.00	1

5.9.11.1. Correlation analysis of RF

The correlation results for the teachers' survey (Appendix 16) revealed very strong positive association between RF11 and RF12 $r_s = .817, p < .01$. Other associations were either strong such as that between RF1 and RF4 $r_s = .634, p < .01$, or moderate as that between RF1 and RF5 $r_s = .453, p < .01$ or weak as between RF2 and RF5 $r_s < .331, p = .01$. The students' survey (Appendix 17) revealed strong positive associations between RF4 and RF5 $r_s = .703, p < .01$, RF11 and RF12 $r_s = .755, p < .01$, and RF13 and RF14 $r_s = .637, p < .01$. There were moderate positive correlations such as that between RF4 with RF2 $r_s = .556, p < .01$ as well as weak positive relationships such as that between RF1 and RF11 $r_s = .274, p < .05$. The results suggested that the items especially those showing strong or very strong associations will increase on the same scale on the corresponding item.

5.9.11.2. Mann Whitney U results for RF

The last factor on the questionnaires was RF with 16 items each for both the teachers and the students. Mann Whitney U test results were found statistically significant for all the items which meant that there were differences between the views of the teachers and the students about all the items on the questionnaires. The effect size calculated revealed small to moderate level dichotomies such as shown by RF2, $U = 2461.50, p < .01, r = -.22$ and RF4, $U = 1332.00, p < .01, r = -.51$.

5.10.12. Results of teachers' interviews

N=30 of the Arab EFL teachers responded to a set of three open-ended questions which were first audio-recorded, and then manually transcribed (Appendix 19) for results and analysis. Teachers responses for each interview question were categorized into prominent themes that emerged out of the data, colour-coded, and tabulated. Results were obtained from the percentage scores that were taken from the overall response number of each category or theme . The sub-sections below present results for the individual interview questions:

5.10.12.1. Results for interview question 1

For interview question 1 (Do you think Arab EFL students use cohesive devices effectively to create appropriate academic texts such as the argumentative essays? If yes, what strengths and weaknesses have you found in students' use of cohesive devices?) three variables were identified and therefore, three types of responses were collected. The first type was designed to ascertain the extent to which the teachers thought Arab EFL students were proficient or deficient in the use of cohesive devices in argumentative essays as well as their strengths and weaknesses in regard to the use of cohesive devices. Table T10-RQ3 illustrates the analytical procedure adopted for interview question 1:

T10-RQ3-MS: Themes & excerpts from teachers' interview question 1

Main Themes	Subthemes	Excerpts from the interviews
CD Use	Proficient use	<i>Cohesion in the text? I would say yes, they do.</i>
	Deficient use	<i>You are talking of cohesive devices, even their sentence level writing is not accurate. There are lot of imperfections and grammatical flaws. So cohesive devices remain a big issue with my students.</i>
Strengths (S) & Weaknesses (W)	Grammatical accuracy	<i>For Arab students because we have different language structures in terms of grammar, so these cohesive devices they definitely outnumber the English cohesive devices. That is why they find problems. (W)</i> <i>But they use them wrongly i.e. they use adjectives in place of adverbs. (W)</i>
	Lexical range	<i>They are good in use of words. Their choice of words, choice of lexical items is amazing you know. (S)</i> <i>Descriptive vocabulary is extremely precise. (W)</i>
	Paragraph organization	<i>They are challenged when they have to organize the text using CDs. (W)</i>
	Cohesive devices	<i>Regarding the devices, definitely there are a number of devices which are used in the argumentative essay, I personally found that as far as most of the students at college level for example they go for the-when they have to give the sequence to the different kinds of ideas like firstly, secondly, thirdly, finally kind of things most of them go for it. (S)</i> <i>They sometimes overuse coordinators and subordinators and sometimes use them in very inappropriate way. We've found that the excessive repetition of the lexical item and sometimes even synonyms are not correct. (W)</i>
	Curriculum matters	<i>I have taught from right from the Prep Year to Academic Writing, I haven't seen a single course and a single part of the syllabus which focuses specifically on the cohesive devices. So most of the time they are missing from the syllabuses. So this my take on the issue. (W)</i>
	Functional use	<i>regarding the weaknesses, it's mainly because they're not aware</i>

		<i>actually of how these cohesive devices work in an academic text. (W)</i>
	Arabic Language & Culture	<i>Moreover, L1 hindrance causes many problems e.g. sentence structure in English is different from that in Arabic. (W) Gulf students don't use cohesive devices in their argumentative writing effectively for one reason which is cultural because the society is patriarchal in its build-up. (W)</i>
	Cognition	<i>But most of the time their memory works for them like they may memorize how to use that cohesive device but if just try to change the context they lose that memory and they may commit some mistakes. (S & W)</i>
	Language proficiency	<i>As English is not their Second language; they study English as a Foreign language and one hour a day in their schools. This deficiency is apparent in their writing in college level. This thing mars their efficiency in becoming a good writer. And use of cohesive devices is, of course, a great skill which I feel they need to work hard. (W)</i>

S = Strength; W= Weakness

Chart C13-RQ3 shows 56.66% of the 30 respondents thought that the Arab EFL students were unable to make effective use of cohesive devices in their academic texts. However, 43.33% of the teachers believed that some students could use cohesive devices in their writing.

C13-RQ3: Teachers' response to students' ability to use CDs

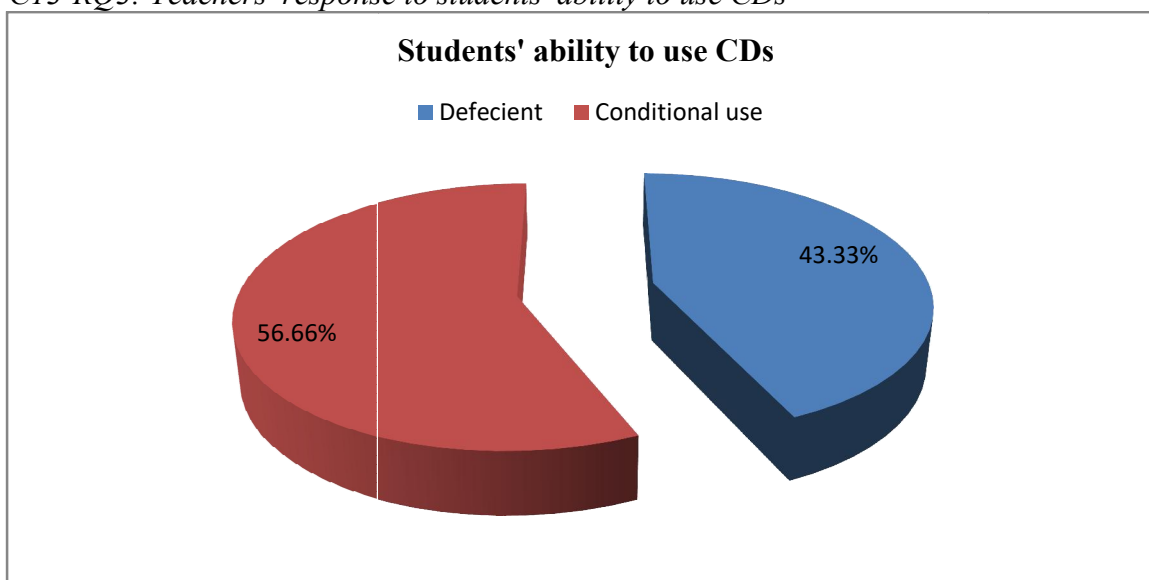
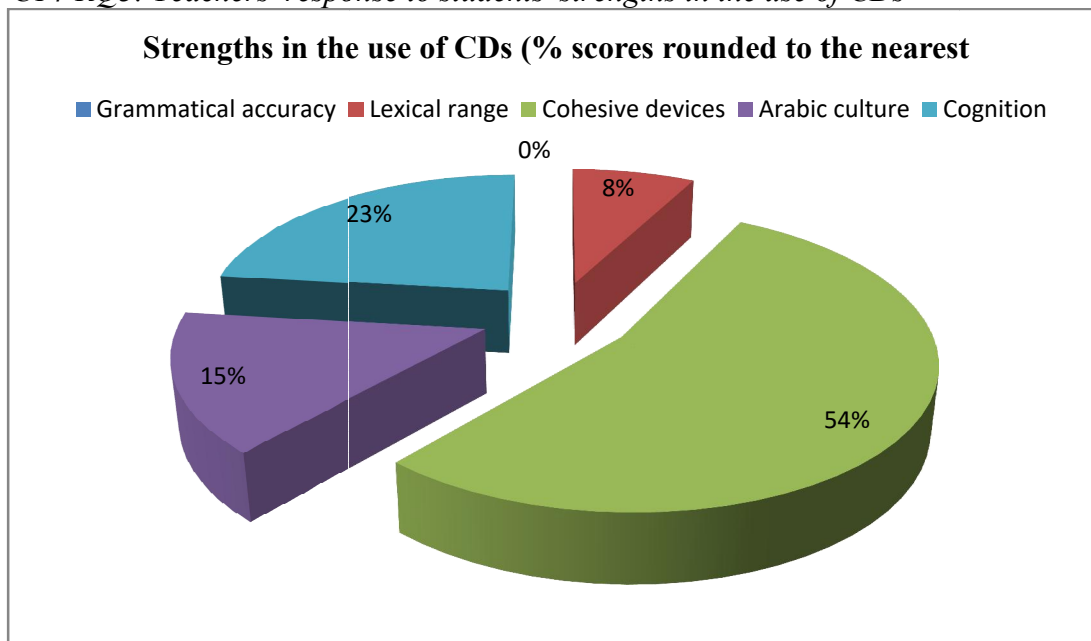


Chart C14-RQ3 reveals that teachers could identify only four strengths from 13 responses as opposed to nine areas of weakness from 72 responses. The highest score (53.84%) was

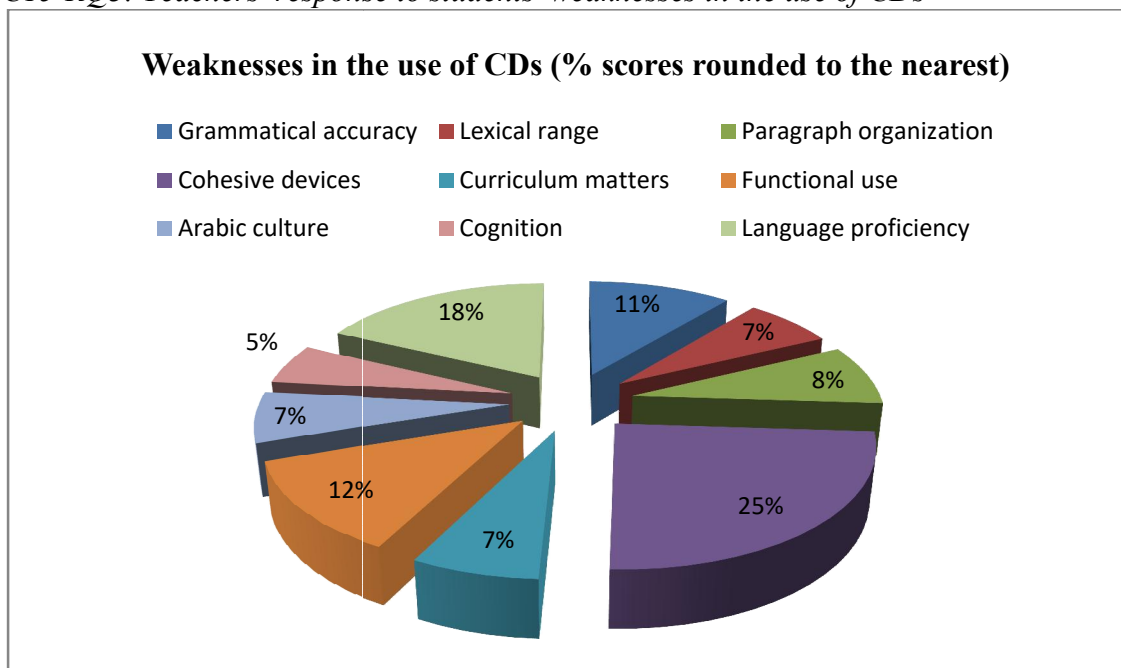
found for "Cohesive devices". "Cognition" with the score of 23.07% and "Arab culture" with the score of 15.38% were identified as strengths contributing to the use of cohesive devices in academic writing. The lowest on the list of strength category was "Lexical range" which achieved only 7.69%.

C14-RQ3: Teachers' response to students' strengths in the use of CDs



The scores for weaknesses in the use of cohesive devices as illustrated in Chart C15-RQ3, on the other hand, were more varied and scattered than the former. Four response types scored 10% or higher while the remaining five responses went below this scale. The highest percentage turnout was 25% for "Cohesion" followed by "Language proficiency", "Functional use", and "Grammatical accuracy" at 18.05%, 12.5%, 11.11% respectively. 8.33% of the teachers' responses went for "Paragraph organization". Quite interestingly, "Lexical range", "Curriculum matters", and "Arab culture" were found on the same scale of 6.94%. The lowest response was 5.55% for "Cognition".

C15-RQ3: Teachers' response to students' weaknesses in the use of CDs



5.10.12.2. Results for interview question 2

Teachers' responses for interview question 2 (Do you think Arab EFL students are familiar with the rhetorical structure (RS) of the argumentative essays? How effectively, in your opinion, do they use cohesive devices (CDs) in the rhetorical structure to achieve different argumentative functions (AFs)?) were also divided into three main categories and further subcategories for each of these as shown in T11-RQ3.

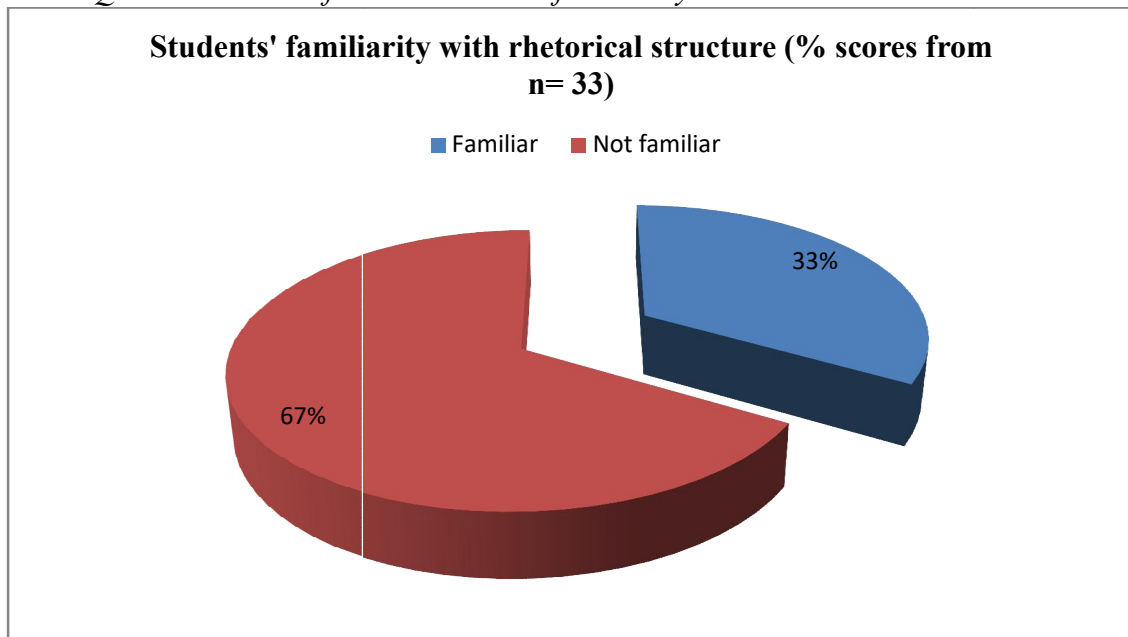
T11-RQ3-MS: Themes & excerpts from teachers' interview question 2

Main Themes	Subthemes	Excerpts from the interviews
Familiarity with RS	Familiar	<i>they can build the structure of an argument with the help of cohesive devices.</i>
	Not familiar	<i>i don't think ss are familiar with RS of the arg. It;s ahighly advanced thing to teach to the EFL ss.</i>
CD use in RS	Grammatical cohesion	<i>They might be ok with reference, but when it comes to conjunctives they misuse. ss have problems with pronominal reference; antecedent; anaphoric reference. SS generally use cds in the beginning of the body paragraphs using cds like first, moreover.</i>

	Lexical cohesion	<i>The use both lexical and grammatical cohesion devices, repetition of the key words and use of proper nouns It is really like a big challenge for them and their word choice is very limited, you know.</i>
	Over/underuse	<i>They seem to make use of simple CDs but don't much use them for academic function like comparing, contrasting . they may underuse or overuse e.g. because; don't use therfeore; in the other hand instead of on the other hand</i>
	Contextual factors	<i>e.g. fail to produce argument when asked to write on topics which are alien to their culture. Usually the Arab learners transfer the stylistic features of the L1 to the target language. For example, the tend to write long sentences with coordinating conjunctions.</i>
Academic function in RS	Orality	<i>the reason why I believe this i that their oral tradition, their oral communication especially in relation to L1, is more stronger than their writing technique and skill.</i>
	Introduction	<i>Students know how to start, how to write their introduction</i>
	Thesis statement	<i>we usually teach them rhetorical/organization structure of argumentative essays, especially, for example the position of the thesis statement, the function of the thesis statement.</i>
	Supporting detail	<i>they hold an opinion and argue very effectively. They know that an argumentative essay has-you have to move from presenting the other side's opinion and refuting them and then presenting your their own position and giving the proof for it, the evidence to support whatever they they believe.</i>
	Conclusion	<i>Students know how to conclude</i>
	Students' inability	<i>problems with thesis statement; evidence and support. They can't properly substantiate. don't know how to argue for a claim. don't create semantic relations at the intersentential level. lack of mastery of functions.</i>
	Unsure	<i>very difficult to explain that how it will work when it comes to argumentative functions or such kinds of writings.</i>

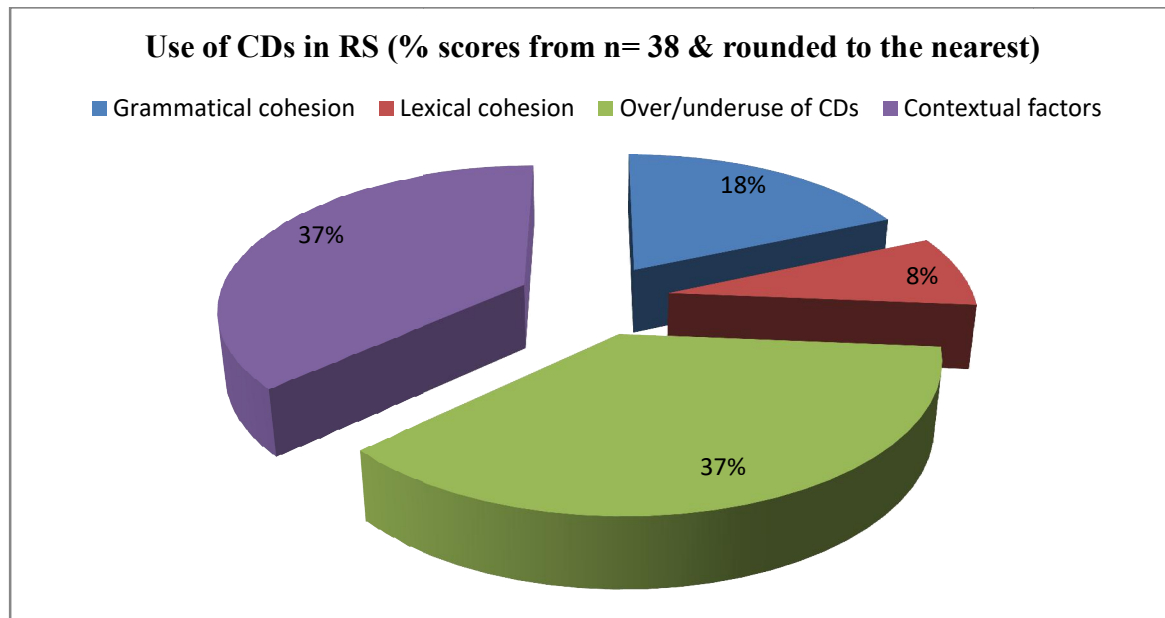
The first category identified teachers' beliefs about students' familiarity with the rhetorical structure of the argumentative essay. Chart C16-RQ3 shows that 67% of the 30 responses suggested that the Arab EFL students were not familiar with the rhetorical structure while 33% believed the students were.

C16-RQ3: Teacher beliefs about students' familiarity with RS



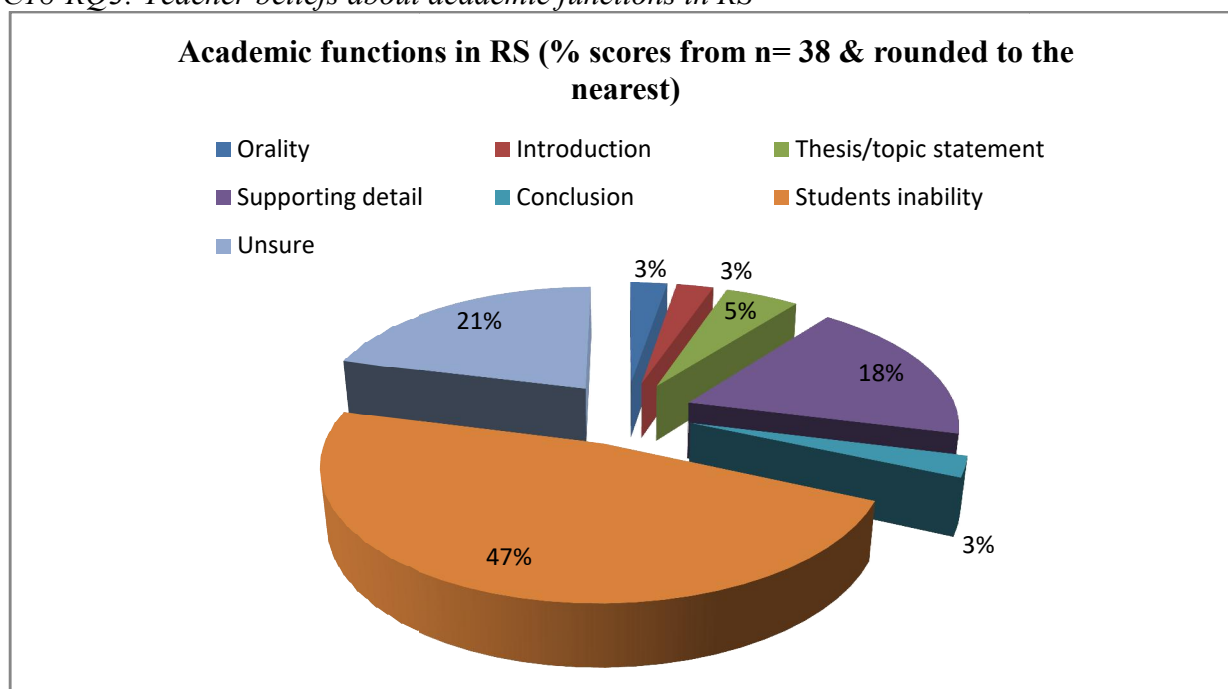
The next response category for this question focused on collecting information about teachers' opinion on students' use of cohesive devices in the rhetorical structure of the argumentative texts. A total of 38 responses was collected for the four subcategories: Grammatical cohesion; Lexical cohesion; Over/underuse of CDs; and Contextual factors. 36.84% each of the teachers' responses pointed towards "Overuse/under use of CDs" and "Contextual factors". "Grammatical cohesion" was chosen by 18.42% of the responses while, "Lexical cohesion" was the lowest among the responses with 7.89%.

C17-RQ3: Teacher beliefs about students' use of CDs in RS



The third response category was created to measure teachers' beliefs about the academic functions they thought the students were able to perform in their argumentative writing, and had seven subcategories: Orality; Introduction; Thesis/topic statement; Supporting detail; Conclusion; Students inability; and Unsure. Chart C18-RQ3 shows the results which were compiled from 38 responses showed that 47.36% teacher responses believed that the students were incapable of using appropriate academic functions in their writing. Similarly, 21.05% felt unsure about these academic functions. Another important response was for "Supporting detail" which was 18.42%. The remaining responses were not much prominent as they were below 10%.

C18-RQ3: Teacher beliefs about academic functions in RS



5.10.12.3. Results for interview question 3

Interview question 3 (What would you suggest to help students make effective use of the cohesive devices in academic writing?) was generated to measure teachers' beliefs about the role of pedagogy in helping students to make effective use of the cohesive devices in academic writing. The question was based on only one main theme which had six subthemes as presented in T12-RQ3.

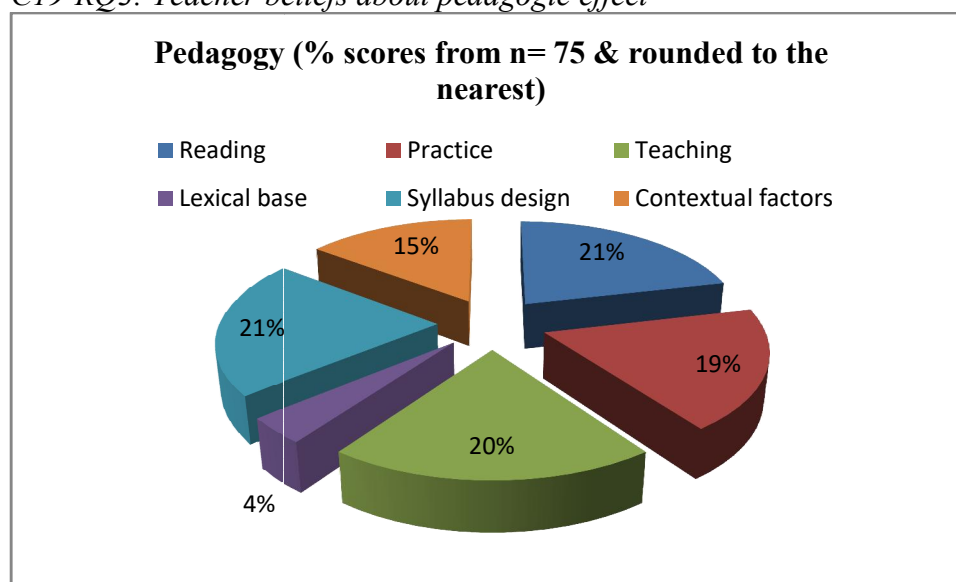
T12-RQ3: Themes & excerpts from teachers' interview question 3

Main theme	Subthemes	Excerpts from the interviews
Pedagogy (PDG)	Reading (PDG 1)	<i>The one thing which is missing is their reading habit. They lack in their reading habits and there is no culture of reading magazines, reading newspapers or some other literature.</i>
	Practice (PDG 2)	<i>But I think a lot of practice, more writing tasks, proper feedback can help them understand and learn and improve their academic writing.</i>
	Teaching (PDG 3)	<i>So why don't we teach students these cohesive devices explicitly to the students giving them ample examples</i>

		<i>because most of them they know them, they know what is a cohesive device. But when it comes to use, yes, they make mistakes.</i>
	Lexical base (PDG 4)	<i>I suggest to improve the lexical knowledge of the students because this definitely affects the learning and the four skills of any language.</i>
	Syllabus design (PDG 5)	<i>The curriculum should be sensitive to the fact that the students once they reach the university level, they need to write a lot.</i>
	Contextual factors (PDG 6)	<i>Arab students don't work outside the classroom; they don't practice. We need to find the means and ways of inculcating these habits that once they go out of the classroom,.....</i>

A total of 75 responses was received from the 30 respondents. Chart C19-RQ3 reveals that except for "Lexical base" (4.16%), all other responses were quite prominent. The highest score (21.33%) was seen for "Reading" and "Syllabus design" followed by "Teaching" at 20.83%. Similarly, 19.44% responses were found for "Practice" and 15.27% for "Contextual factors".

C19-RQ3: Teacher beliefs about pedagogic effect



5.11. Chapter summary

The chapter presented results that were obtained for the main study. Results for the main study were expanded to include more details about the data so that more reliable inferences about the results could be made for logical explanations in the next chapter on "Discussion". The results of the text analysis revealed that students made appropriate use of CDs with some instances of inappropriate and overuse. Lexical cohesion and Reference were found statistically significant both for correlations and comparisons with the variables of the study i.e. text length, sentence units, cohesive devices per text, cohesive density, and Exam and cohesion scores. Conjunctions though with considerable presence in the corpus were statistically non-significant, while Substitution and Ellipsis were rarely used. The results also revealed use of CDs in the RS and most of the CDs were, as a rule, identified in Claim and Support moves. Moves in the three stages of the rhetorical structure of the sample essays were significantly correlated. Results of the structured questionnaires and teachers' interviews revealed teachers and students' beliefs on multiple items in regard to the teaching and learning of CDs and academic writing in the Arab EFL world. There were agreement between the two respondents on some matters while a high level of disagreement was more frequent.

Chapter 6: Discussion

6.0. Introduction

This chapter attempts to provide explanations for the results presented in the previous chapter. The results indicated that cohesion devices were moderately positively associated with the text length which entailed that number of CDs increased with an increase in the text length. Lexical cohesion (49.38%) was the most frequently used devices followed by Reference (36.43%), and Conjunction (12.64%) in the entire corpus (n = 1954). However, only Reference and Lexical cohesion were found statistically significant in their association with the overall cohesion use in the sample texts. Similarly, cohesion use was found statistically different between two extremes of the text length which corroborated the correlation results that texts with longer length had a higher number of cohesive devices. This was further supported by the relatively higher occurrence of Reference, Conjunction and Lexical cohesion in longer texts. This pattern of the use of CDs corroborates Bae (2011) whose study discovered similar results for the occurrence of CDs in students' texts. However, Bae's (2011) study which was conducted in a Korean school context also suggests that the extensive use of lexical cohesion is not a strong determiner of the cultural impact as is generally assumed, and may transcend socio-cultural boundaries for wider generalization.

The sections below discuss results for research question 1, 2, and 3 respectively to find out the role of cohesion as a text-forming property in the academic writing of Saudi undergraduate students of EFL.

6.1. Discussion on research question 1

Discussion on the results of research question 1 primarily draws on the textual analysis done for the question in Chapter 5. It, however, also refers, wherever relevant, to findings from teachers' questionnaire, teachers' interviews, and students' questionnaire to collate results of the text analysis. The results of the categories (Reference, Substitution, Ellipsis, Conjunction, and Lexical cohesion) and their subcategories in regard to appropriate and inappropriate use as well as overuse are analytically discussed to identify the formation of texture through the nonstructural source of cohesion devices. Moreover, cohesion use is analyzed in terms of the

relative scores for cohesion to see if cohesion impacts writing quality and the overall Exam scores. Relevant reference to studies that support or refute the results is also made. Similarly, some obvious limitations of the results as well as implications of the results have also been included in the discussion.

6.1.1. Overall appropriate, inappropriate and overuse of CDs

The results of the appropriate and inappropriate use of cohesion in students' texts revealed that the inappropriate and overused CDs did not adversely affect the quality of cohesion in writing, and thereby the creation of texture in texts. Students' use of appropriate Reference, appropriate Conjunction and appropriate Lexical cohesion was strongly correlated with the overall use of the corresponding cohesive category in the texts. The inappropriate use was either statistically significant but moderate or weak such as that between total Reference and inappropriate Reference or statistically non-significant such as that between total Conjunction and inappropriate Conjunction and total Lexical cohesion and inappropriate Lexical cohesion. The overuse of Reference, Conjunction and Lexical cohesion, on the other hand, was found statistically positively correlated with the total use of the corresponding devices. Moreover, the appropriate, inappropriate and overuse of cohesive devices was statistically significantly varied in terms of their mean ranks both in the respective category use as well as across the categories.

6.1.2. Referential cohesion

Discussion on the use of referential cohesion is based on the results obtained for the Personal (R1), Demonstrative (R2), and Comparative Reference (R3).

6.1.2.1. Appropriate use

Referential cohesion is the second most common device after Lexical cohesion which has been used by the students to produce cohesive texts. From the overall corpus of 1954 CDs, students employed 36.43% of referential cohesion which supports Bae (2001) but contradicts Yoon-Hee's (2011) study where referential cohesion has the highest percentage of use in the texts. Saudi undergraduate students thus seem to be quite comfortable while

using reference devices. This seems logical because the appropriate use of Reference (30.55%) clearly outnumbers the inappropriate use (5.88%).

Personals or pronominals are the most frequently used subcategory in Reference comprising of 18.73% of appropriate use in the overall corpus. This pattern of pronominal use supports Zhang's (2000) findings of a high pronominal use. In other words, 81.69% of R1 has been appropriately used by the students in the current study. R2 with 84.79% accuracy score contributes 9.41% of appropriate use to the corpus. R3 has 2.40% of appropriate use in the corpus with no instance of inappropriate application. The high proportion of the reference devices is an evidence of students' ability to use these building blocks of cohesion accurately to create texture in their writing. This is further supported by the relatively high presence of pronominals and the deictic which form 47% and 16% respectively of the reference devices in the texts. The students employed "*they/them/their*" more often than "*he/she/him/her/it*" probably because while writing argumentative essays they chose to move from the general to the specific using plural nouns as their antecedents. There is also significant use of the specific demonstratives "*this/these/that/those*" and the non-specific demonstrative - the definite article "*the*" which form 19% and 11% respectively of referential devices. This entails that students were quite successful in using notions of proximity and specificity in their writing. These results support Liu and Braine (2005), but contradict with Neuner's (1987) findings that the use of demonstratives was a little higher than the definite article. Similarly, some students have successfully used comparative reference which though not highly frequent in relation to R1 and R2 shows these students' ability to draw comparisons while at the same time connecting the text with the preceding item or ideas. This appears to give the text not only syntactic variety and complexity but also creates semantic relationships. The examples from students' texts given below illustrate some of the significant trends in the use of reference devices:

- i. *People think that Saudi youth are losing thier cultural Identity. i agree with them.*
- ii. *I disagree with that completly.*

- iii. *by culture we can make the difference between nations. in my country Saudi Arabia keeping the culture is very important because some of the culture is from our religion islam.*
- iv. *Because the more tests they perform the more they will get tired of it in the middle of the semester and the more it'll affect their grades.*
- v. *They believe that people who are getting comfortable life are the happiest people.*

The deictic "*their*" and the objective pronoun "*them*" in (i) refer back to the subject noun "*people*". In (ii), the demonstrative "*that*" refers back anaphorically to the idea expressed in the previous clause. Here, the demonstrative has been used as coreferential item rather than a device to mark proximity. The definite article "*the*" in (iii) lends specificity to the first mention of "*culture*" in the beginning of the previous sentence which entails that the students are familiar with the use of the definite article. Similarly, the use of comparative reference in (iv) and (v) not only creates cohesion at the structural level but also at the semantic. Moreover, the instances of "*the*" in these examples and elsewhere in other texts indicate that the students while writing argumentative essays probably attempted to create a sense of compatibility with the reader. This feature of the use of "*the*" seems to have visible contribution towards the creation of texture in the essays.

6.1.2.2. Inappropriate use

The inappropriate use of reference devices, on the other hand, is not very frequent but reveals some very useful information about students' functional use of language in regard to the use of CDs. These results also collate with teachers and students' perceptions (research question 3 for details). Inappropriate R1 forms only 4.19% of the overall CD use in the corpus or 18.30% of R1 while R2A constitutes only 1.68% of the corpus or 7.36% of referential cohesion. These figures point out that the students' issues are mainly with the pronominals; however, there are a few challenges in regard to the accurate use of the demonstratives also. The excerpts below taken from students' essays reveal some of the more frequently used inappropriate Reference:

- vi. *People with money know the importance of giving some of the responsibilities to others so "they" can help.*
- vii. *I think video games cause behavioral problmes in youth more than the small benefits they get. In the following paragraphs i will write more details about those behavioral problmes and the other side of good effects.*
- viii. *So, do not hesitate from playing video games or provide it to your children if you are going to use it carefully as it is full of fun and learn.*
- ix. *According to recent resarche conformed that, the youth who play video games they lives in other world and there is no linke between them and the real world.*

The use of "*they*" in (vi) is ambiguous since the pronoun can be understood to refer to both "*people*" and "*others*". This feature is typical of the impact of Arab culture which requires the readers to resolve ambiguity (Mohammad & Omer, 2000). Suffice it to say that this type of use is unlike the native English use where the text itself helps in the retrieval of the antecedent, and therefore, needs some sort of contextual intervention to get back to the presupposed item. In example (vii), the demonstrative "*those*" refers back to "*behavioral problems*" mentioned in the previous sentence but is inappropriate as it violates the notion of proximity by ignoring nearness to remoteness. Instead, "*these*" would have been the right choice. This is, however, prescriptive view of the use of demonstratives which is generally taught in the classroom. From SFL point of view, the deictically distant "*those*" can be a valid choice. Some students had problems distinguishing between the number (singular/plural) of the antecedent as is evident in (viii) where the student writer applies incorrect anaphoric "*it*" three times to refer back to "*video games*". Example (ix) is a typical instance of L1 transfer where the student inserts a pronominal "*they*" between a noun-phrase and verb-phrase.

6.1.2.3. Overused reference

Some students also overused Reference at certain points in their texts. I was able to identify 64 reference items that were overused which make up 8.98% of the reference devices and 16% of the entire overuse in the corpus.

- x. *Saudi people is known by eating rice by hands but now day they start to eat by using spon and forke and also it changes the way they speak to people. when they are traviling alot they will start to hear alot of people talking and they may take their accent or the way they speak.*
- xi. *Parents promise their kids if their behaiv good they will get the games they want or if they do good in the school they will get the games they want or the game device they want.*

The pronominal "they" has been excessively used in two examples (x & xi) while referring back to "people" and "parents". This may be because the students are unable to conceive of an alternative syntactic structure where they may avoid such an overuse. Secondly, they appear context bound to use "they" repeatedly as they use repetition of lexical items which is a highly prominent aspect of these students' rhetorical strategy.

6.1.3. Substitution and Ellipsis

Saudi students' argumentative essays are not very frequent as far as the use of Substitution and Ellipsis is concerned. However, they did use these devices but, as the results indicate, they were widely dispersed in the texts. .51% Substitution and 1.02% Ellipsis were identified in the entire corpus of CDs in the sample texts. These findings support Bae's (2001) study which had less than 1% of these devices. Most of the teachers felt that the students cannot use both the devices appropriately; however, the students voted in favour of Ellipsis and against Substitution (research question 3 for detail). Some instances of the use of Substitution and Ellipsis are presented below:

- xii. *In conclusion, it is right that video games have a lot of bad affects more than the good ones [S1] but i am not saying the parents should not allow them to play at all.*
- xiii. *They believe that happiness is about seansations and [S3] not about materials such as, mony.*
- xiv. *Although some people got their money from their parents, many [E1] worked hard to reach where they are now.*

xv. *Cultures were came from religion and sometime [E3] from famouse people.*

These students seem to be applying some of the fundamental uses of both Substitution and Ellipsis in these examples. They, in fact, save the writer from encoding and decoding repetitive information and lend the text a sort of maturity of expression and style. This aspect is evident in the examples where the substituted or the ellipted item is located in the linguistic context of the text. For instance, in (xii) the proform "one" substitutes "effects" which is in the immediate textual context and creates a relationship of the referent and the presupposed - a mandatory qualification for the cohesive relation to exist. Example (xiii) illustrates the use of clausal substitution where "*happiness is about*" is substituted. Similarly, (xiv) and (xv) show how students used nominal and clausal ellipsis to achieve cohesion in their writing.

This statistically low use of Substitution and Ellipsis can be justified by the fact that they are basically a feature of spoken discourse and “are more characteristically found in dialogues” (Halliday, 2000 p. 337). Therefore, their underuse in formal especially argumentative writing does not seem to be a strong variable in the creation of texture.

6.1.4. Conjunctive cohesion

A total of 247 conjunction devices were identified in the corpus of CDs for the present study out of which 229 were appropriately used by the students. However, conjunctions were not found statistically significant in terms of their association with WPT, SUPT and CDPT which suggested that the students' choice for conjunctions varied considerably according to individual or contextual priorities. Nevertheless, 92.71% of appropriate conjunctions which forms 11.71% of appropriate use in the corpus is significant statistically as it clearly indicates that most of the students were able to apply their knowledge of conjunctives effectively - a fact supported by most teachers but refuted by most students (research question 3 for details). This high percentage is supported by Mahmoud (2014) and Mohamed (2016) who discovered 91% and 94% correctly used conjunctions in students' writing respectively. For the current study, C2 was the most commonly used conjunctive device with 31.17% use from 247 devices followed by C3 (23.88%), C4 (22.67%) and C1

(22.26%). These figures contradict Hamed (2014) who find C1 to be the most frequently used conjunction in academic writing.

However, a deeper analysis reveals some useful features of conjunctive devices as employed by the students in argumentative writing. English language has a repertoire of approximately 80 conjunctives or logical connectors (Asassfeh, et.al., 2013); however, the students of the present study could employ 34 types. Only seven out of these 34 conjunctives (*for example, however, but, on the other hand, because, so, in conclusion*) were prominent; the others were few in number and widely scattered along the texts.

6.1.4.1. Appropriate conjunctions

The most commonly used appropriate conjunctive was C2 which was 3.58% of the entire corpus and 90.90% of the overall C2. This was followed by C3 which formed 2.86% of the corpus but was at a slightly higher percentage (94.91%) of appropriate use than C2. C4 found the highest percentage (98.21) of correct use in its category but was lower in its presence in the corpus with the score of 2.81%. C1 was the lowest in terms of both corpus scores (2.45%) and category scores (81.27%). The excerpts from students' essays presented below substantiate some of the recurring use of C1, C2, C3 and C4 respectively:

xvi. *They would pay all their money to get their health back even if they already have everything a normal person would dream of. And this exactly shows why money isn't the reason that can make you happy in your life.*

xvii. *Moreover, they start using some facts and arguement that support their opinion.*

xviii. *for example my 6 years old sister she is 24 hours on her smartphone without human intraction.*

The examples (xvi), (xvii) and (xviii) reveal that the C1 use adds new information to the previous either through the additive "*and*" or "*moreover*" or through exemplification. Despite the fact that the use of additives lends continuity and flow to students' discourse by establishing relationships between ideas, there is relative dearth of variety. "*for example*" is the most commonly applied additive which indicates that most students adopted

exemplification as a rhetorical strategy to support or refute claims or counter-claims. This lack of variety in the use of additives can be attributed to students' lack of knowledge of conjunctions that are applied to establish extension. However, the most significant revelation is in regard to the use of the additive "and" which is, in Arabic discourse, reportedly the most frequently occurring conjunctive in its category (Mohamed-Sayidina, 2010). This aspect was also reported in the interviews of teachers for the present study. In fact, Arab students do use "and" in recurring patterns but the use is mostly that of a coordinator, and as Halliday and Hasan (1976 p.233) suggest, it is "structural rather than conjunctive". It can, however, be used as an additive device when "the 'and' relation operates conjunctively, between sentences, to give cohesion to a text - or rather to create text, by cohering one sentence to another - it is restricted to just a pair of sentences (Halliday and Hasan, 1976 p.234). This restriction on the use of "and" as an additive conjunctive has serious implications for future research on cohesion, and calls for empirical distinction between the structural and conjunctive use of "and". From genre studies perspective, the argumentative essays employ a lesser use of the conjunctive 'and' as compared with other genres such as the spoken narrative. Viewed from this aspect, a few instances of the use of 'and' in academic writing such as that of my students can be justified.

The examples below illustrate the use of some frequently used adversatives in students' writing:

- xix. *Some people think that money can actually buy happiness. However, I think that happiness is something you can get for free.*
- xx. *Money is important and every one should care about it and collect it but it is not every thing you want to be happy.*
- xxi. *On the other hand, some people says that cellphone are making the personal relationships stronger.*
- xxii. *In fact the player can develop himself from video games as video games sometime become emotional.*

Adversative conjunctions extend previously-given information in the text to add opposing information (Alarcon and Morales, 2011). Adversatives appeared to be of the highest frequency in the present study, and as can be seen from the examples above, helped the students in the process of developing argument. For instance, the use of "*however*" in (xix) indicates emphasis on a counterclaim established by the writer in response to the claim in the previous sentence. The use of "*but*" in (xx) simply contrasts with the general stance taken in the previous clause. Similarly, "*on the other hand*" in (xxi) contrastively but emphatically extends the argument already mentioned in the text. The use of "*in fact*" in (xxii) expresses avowal so that the supporting evidence for the argument could be justified.

However, the students showed a limited range in the use of adversatives with '*but*', "*however*", and "*on the other hand*" being relatively frequent. This entails that the students could not easily use different types of adversatives to either substitute the already used such as "*however*" with "*nevertheless*" or "*despite this*", for example, to create lexical variety or for some other semantic functions such as correction and dismissal using "*instead*", "*rather*", "*in any case*", "*anyhow*" etc. Following the notion of form and function, it is evident that students preferred certain types of adversatives to others in order to achieve their discourse objectives in the argumentative essays. This, however, implies that argumentative writing pedagogy should explicitly cater for the inclusion of conjunctives especially, the use of adversatives.

Discussion on the use of causal conjunctions follows with these examples:

- xxiii. *one of the reason why Saudi youth are losing thier cultural identity is becuse they start to copy other people from outside.*
- xxiv. *First reason cell phones are like a big world. You can contact with people from different countries. So you will face different cultures and will increases your knowledge about those cultures.*
- xxv. *Therefore, the huge number of tests will result in bad performance for the students.*

The causal conditions "*because*", and "*so*" were frequently evident in students' writing with some instances of "*therefore*" also. The primary function of the causal conjunctions is to mark the specific impact of the information that has been previously stated. In (xxiii) "*because*" establishes the relationship between cause and effect - a rhetorical function typical of the argumentative genre which facilitates the writer to provide evidence for his claims. The general causal "*so*" in (xxiv) creates a relationship between the previous information and signals the result for the causes implicit in the previous two sentences. Likewise, "*therefore*" in (xxv) is also general in its use of causality. The causal conjunctions basically function to predict probable effects in the event a proposition stated in the text is materialized. To this extent, the students of the present study have been able to make appropriate use of causal conjunctions. But, their range of causal variety is limited only to the general types which entails that their functional knowledge about other causal conjunctives that signal reason (e.g. *for this reason*), result (e.g. *in consequence*), purpose (e.g. *with this in mind*), polarity (e.g. *otherwise*) etc. is quite restricted. The obvious implication of such functional gaps in the use of cohesion devices appears to be the need of explicit instruction and extensive practice which EFL pedagogy should share in spite of all the curricular or institutional constraints.

Like the causal devices, the temporal conjunctions were also used in a restricted manner. The examples below reveal the two major functions of temporal use that were identified in students' texts:

- xxvi. *In conclusion, increasing the number of examination will not result in positive grads or marks of students.*
- xxvii. *To sum up, the increasing of tests will inflaience the performance of student in final exam directly.*
- xxviii. *First, video games make the child alone which will cause him some real diseases so that he will feel lonely and don't know how to talk to people or deal with them.*

Examples (xxvi) and (xxvii) are typical instances of how student writers signal summarizing or summing up of the discussion in discourse. The use of "*first*" in (xxviii) is sequential and following Halliday and Hasan (1976 p.263) is a "typical cataphoric temporal" because "the expectation is that an item such as *then*, *next*, *second* or *finally* will follow". The students who used "*first*" conformed to this principle as the following text had other sequential items mentioned in the quote above. Temporal conjunctives create a more explicit relationship between ideas than adversative and causal conjunctives. Besides, they are also an observable feature of most books on EFL writing. However, their use is restricted only to sequential ordering or summarizing. Other types of temporal relations such as simultaneous (e.g. at the same time), preceding (e.g. earlier), immediate (e.g. thereupon), interrupted (e.g. presently) etc. do not seem prominent in EFL writing curricula; hence, students' limited use of the conjunctive.

6.1.4.2. Inappropriate use of conjunctions

The inappropriate use of conjunctions as earlier reported in the results is statistically non-significant as compared with the appropriate use - only 18 out of 247 conjunctives were identified to be misused by the students. This suggests that conjunctions were not seriously challenging for the students. The examples substantiate some of the patterns of misuse of conjunctions in students' essays:

- xxix. *In the other side, youth who are living in cities will defintitly lose their identity.*
- xxx. *For instance, children are showing alarming levels of bullying on other weaker children. Also, young people are using more aggressive verbal words and body*

languages in communication. On the other hand people who supported this type also argue that its only for fun and will not affect the young .

- xxxi. *Third, video games will affect his acadimic learning and get bad grades because he is playing all the time and give no time to study.*

Examples (xxix) and (xxxi) highlight errors of form since the students could not structure proper conjunctive "on the other side/hand" in the former - a problem also noted by one of the teacher responding to an interview question for the present study. The latter shows issues that emerge from L1 interference because the number of adjectives in Arabic is more than that of adverbs. Kharma (1985) points out that Arab learners have problems with the use of adverbs and often confuse them with adjectives. These errors, however, do not seem to affect the conjunctive function that is intended. On the other hand, the misuse of conjunction distract the reader in properly understanding the semantic link between two instances in (xxx). Following the contextual development of support evidence, perhaps, no conjunction is needed in the presence of "also" in the same sentence. Even if one is needed, an additive conjunction is probably more suited than the adversative "on the other hand".

6.1.4.3. Overuse of conjunctions

Conjunctions are the least overused CDs in the corpus with only 21 instances. The short extract from a student's essay illustrates the overuse of the additive conjunction.

- xxxii. *For example, I go to many weddings in one year most of them dance on Ala'ardah except few people who dance on music. On other hand, people who agree they also support their idea with some facts. For example, Saudi youth can not use some culture things such as Almogamma'a. For example, There are some cultures dance by using the gun (Almogamma's) but 70 percentage of Saudi youth can not dance by using Almogamma'a. Moreover, some of Saudi youth try to be like some players of Eurpe in their hair cut and movement such as Rony. Moreover, We are muslim people and we have just two Eids in one year called as Eid Al-Feter and Eid Al-Adha but some Saudi youth celebarate on non muslim celebration such as birthday.*

This piece of text is fairly dense in the use of conjunctions which have been underlined. Those in bold illustrate overuse. This overuse of the additive reveals that the student could not either extend his supporting evidence for a claim without dependence on conjunctions or could not find alternative additives to substitute for "*for example*" and "*moreover*".

The results for conjunctions bring forth two very interesting findings: First, the very limited use of the additive "*and*" refutes most other research claims in the Arab context (Hamed, 2014); secondly, following Johns (1980) that around 10% conjunctive use is typical of the NS texts, these texts with 12.64% use stand very close to the NS standard. However, the range of conjunctives especially those which have been more frequently used is very narrow, and thereby restricts conjunctive functions to a very few. But it cannot be assumed with certainty that low percentage of conjunctions help EFL students produce texts of the NS or near NS quality. Since the present study does not propose to study this type of relation, future research in Saudi EFL context can take up such an initiative.

6.1.5. Lexical cohesion

Lexical cohesion was the most extensively used cohesion category in students' essays. Among the five sub-categories, repetition found the highest percentage (49.38%) in the entire corpus of CDs and 76.78% of the category use. L4 accounted for 7.46% of the category use followed by L3, L2, and L5 each contributing 5.69%, 5.18%, and 4.87% respectively to the category. The results show that Lexical repetition was the most predominant and consistent cohesive device used by the students. Since other lexical devices did not contribute significantly to the textual cohesion in students' writing, it can be assumed that the students were strongly inclined to use the same item repeatedly to build argument and its support. These results are consistent with most research findings on lexical cohesion in EFL contexts especially, the Arab (Abdul Rahman, 2013; Khalil, 1989; Liu & Braine, 2005; McGee, 2009). This is also supported by the teacher participants in their response to interview and questionnaire items where they agreed to students' ability to use reiteration (L1, L2, L3, L4) and inability to use Collocation (L5). The students' response did not favour competent use of the Lexical cohesion as most of them chose the negative side of the scale (research question 3 for detail).

6.1.5.1. Appropriate use of Lexical cohesion

In terms of percentage scores, Lexical cohesion was more appropriately used than referential devices. 942 out of 965 lexical items were found appropriately used which makes 97.61% of the category use and 48.20% of the corpus. L1 accounted for 78.66% of correct use in the category and 37.92% of the overall CDs (n=1954) in the texts. Other types of Lexical devices though not highly frequent were mostly appropriate. The results of appropriate Lexical cohesion contradict Berzlánovich (2008) who found a higher frequency of errors in Lexical devices. The examples from students' writing below show some of the sample use of Lexical cohesion:

- xxxiii. *In fact, it will decreases the (performance)of students on YIC. Also, not only the performance will be (affected), the social life of students will be affected further more.*
- xxxiv. *Happiness is the thing that the whole humans are look for. All people are pursuing happiness and only few people can cach it.*
- xxxv. *So family must be careful with there children when they give them a cellphone.*
- xxxvi. *Relationships is important thing in our life.*
- xxxvii. *And argue that there is too much testing in YIC. Although some students oppose this argument, I agree there is too much testing in YIC.*

In (xxxiii), there are two instances of repetition of the same word that is visible in the underlined items as referents and the bracketed as presupposed. "All people" in (xxxiv) has been used as a synonym for "the whole humans" in the previous sentence. In addition, (xxxv) shows the use of a superordinate where "children" and "family" relationship (part-whole) is established. Example (xxxvi) illustrates the use of the general word "thing" which refers back to "relationships". The word chain of "argue - oppose - agree" in example (xxxviii) substantiates one of the ways the students applied their knowledge of collocations in the essays.

6.1.5.2. Inappropriate use of Lexical cohesion

There were a very few instances of the incorrect use of Lexical cohesion in the texts.

However, they reveal some interesting facts about errors of form and L1 transfer as is shown in the following examples:

- xxxviii. *Now a days technology had become one of youth needs which helps them to lose their identity culture as it connect them with the open world and give them many ways and styles life.*
- xxxix. *he will start to eat different food or he will wear other traditional clothes and also the Saudi accent will be less.*
- xl. *the Saudi culture identity (presupposed= culture) is gone time by time spessially in Saudi youth.*
- xli. *they also cliams that saudi youth in the way to improve and devlops thier life by technologies fasion.*

Example (xxxviii) is a typical instance of L1 transfer. Unlike English (*adjective + noun*) structure, Arabic follows (*noun + adjective*) pattern, and this is repeatedly reflected in students' writing; hence, expressions such as "*identity culture*" and "*styles life*". L2 use of "*other traditional clothes*" in (xxxix) when read in the context needs a prefix "*un*" before "*traditional*" to mark the contrast with previous information in the text, and create a similarity of semantic meaning that is being conveyed. Example (xl) unfolds error of form (*cultural* needed instead of *culture*) in the use of a superordinate item (the presupposed item bracketed). The general noun "*the way*" in (xli) is contextually inappropriate and could have been substituted by "*an effort/attempt*" for clarity of meaning.

6.1.5.3. Overuse of Lexical cohesion

Overuse of Lexical cohesion is the most widely discussed area in research on Lexical cohesion, and especially that of repetition which is the only source of overuse in its category in the present study. Lexical repetition constituted 79% of the entire overuse in the corpus which is significantly higher than Reference and Conjunctions. 310 lexical items were found

to be overused and this accounts for 15.86% of the entire CD use in the corpus. These results support Kafes (2012) who also identified an extensive use of L1 devices. The most significant feature of overuse of L1 in the present study is the frequent use of lexical items stated in the topic statement such as "*happiness - money; cultural identity - Saudi youth; video games - youth; cell phones - personal relationships*" etc.

Apparently, the preponderance of lexical items in students' writing seems justified especially in view of the fact that they were writing argumentative essays and needed extended ideas to make claims and provide supporting evidence for the claims. Moreover, the Arab cultural impact cannot be overlooked for its influence on students' texts in regard to the excessive use of repetition of the same lexical item. However, a deeper analysis unveils some further insights into the use of Lexical cohesion by the student writers of this study. The highly repetitive use of the same lexical item and scarcity of synonyms, superordinates, general words, and collocations indicate that the students' storehouse of lexis is extremely limited in range and variety.

Discourse in Arabic is marked for lexical repetition (Al-Shurafa, 1994; Shunnaq and Fargha, 1999) but there are two main discourse functions of repetition: restate or emphasize a thesis, and create structural and semantic cohesion. From the structural perspective, repetition establishes relationships of cohesion between the referring item and the presupposed item, and thereby creates hierarchy of cohesion levels. From the semantic point of view, repetition aids the writer to further explain his stance or ideas and as Reynolds (2001) suggests, link new with the previously stated information. Following El-Gazzar (2006), the students in this study, however, used repetition of the same lexical item to mostly stress upon specific ideas in their essays and that too on those only which were directly linked with the topic. For instance, there is frequent referral to topic related vocabulary in the texts and items like "*money - happiness*"; "*Saudi youth - cultural identity*"; "*cell phones - personal relationships*" etc. repetitively occur in the samples. Use of repetition for emphasis on thesis is not very obvious in these texts. Another important feature of repetition is that it helps the readers to interact with the text and facilitates comprehension by helping the reader retain his schemata of the main propositions. The students of this study did use this feature and there are instances in their texts where the presupposed item is, in fact, quite distant from the

referring but owing to repetitive use of both lexis and ideas, the distance does not impede comprehension. However, repetition as a cohesive and rhetorical device is not specific to the Arab students only. Students from other EFL backgrounds such as the Chinese (Liu and Braine, 2005), and the Spanish (Llach and Catalan, 2007).

The students also used synonyms in certain contexts in their texts but as Witte and Faigley (1981) observe that only very highly proficient writers use relevant variety of synonyms, their limited occurrence in the present study indicate that the students are novice writers with limited range of vocabulary. The same can be assumed in regard to the restricted use of superordinates, general words and collocations. One obvious implication that can be derived from students' use of lexis is that both writing curriculum and writing pedagogy in Saudi EFL context need to be revamped and that reading be integrated with writing to expose students to model texts in order to develop their vocabulary as well as general knowledge about the model texts. This concern has also been voiced by many teachers in their interview for the present study.

6.1.6. Cohesion and students' exam/CD scores

My data results revealed that the text length and number of sentences per text did not correlate with both the Exam and the cohesion scores. This finding contradicts most studies on the relationship between writing quality and the text length (e.g; Chodorow & Burnstein, 2004; de Haan & van Esch, 2008). The Exam and cohesion scores were only weakly correlated with cohesive devices per text. More specifically, there was significant association of the Exam score with the overall appropriate CDs, especially Reference and Ellipsis, and that of cohesion scores with the overall CDs, especially with Reference and Lexical cohesion. These results, however, did not indicate any significant association of the Exam and cohesion scores with inappropriate, and overused CDs - a finding supported by Mohamed (2016). Non-parametric variance results of the Exam and the cohesion scores with CD density in texts were found statistically significant between low and moderate, and low and high density groups. Exam and cohesion scores in relation to individual cohesive categories showed that Reference and Lexical cohesion were statistically significant in their mean ranks in regard to cohesive density in the texts. Further analysis indicated mean rank

differences in the use of Reference, Substitution and Lexical cohesion between low and moderate density, and between low and high density use of cohesion devices.

It is interesting to note that although there is a slight increase in the number of cohesive devices with an increase in the text length but this does not affect both the Exam and cohesion scores. As revealed by the correlation analysis, it was cohesive density which impacted students' grades not very strongly though. This is supported by the non-parametric variance results which identified differences in texts with low and high cohesive density. Consistent with most other research findings (Llach and Catalan, 2007), referential and lexical cohesion were found statistically significant in those texts which were significant for their affect on cohesion scores. Quite interestingly, the inappropriate and overuse of CDs did not affect both the Exam and cohesion scores. Keeping the results of the appropriate use and their significant relationship with the Exam and cohesion scores, it can be argued that the students used cohesive devices appropriately which successfully aided in the creation of texture in their writing.

This analysis of associations and comparisons of Exam and cohesion scores with writing quality has, however, limited generalizability for both the research context and beyond. First, I used the Exam scores which had been awarded by the raters at the research site. The assessment scale did not provide for any explicit provision for the assessment of cohesion, and therefore, the assessment for the Exam and cohesion scores had to be based on assumption. The Exam scripts were marked holistically and my adapted assessment scale used the same with the exception that the uneven scale was balanced for the Mid and the Final term exam scripts. Therefore, only a holistic analysis could be obtained. A scale to assess the 18 categories of cohesion (Halliday and Hasan, 1976) individually, a viable focus for a new research study, would give an accurate measure of relationship between cohesion and writing quality. The analysis also revealed some visible gaps in the pedagogic, curricular, and assessment system being practiced at the research site. For instance, despite the exclusion of explicit provision for cohesion in the instructional and the assessment design, the students were able to successfully employ cohesive devices to create texture in their writing. Nevertheless, correlation between writing and cohesion has been a fluid topic unfolding results which are both supporting and contradictory. A number of variables such

as the research context, the student writers' language proficiency profile, the pedagogic preferences, the assessment rubrics, the raters etc determine the outcomes of results which often lead to significant variations in the conclusions drawn for the topic.

6.1.7. Cohesion and texture in students' argumentative essays

Research question 1 attempted to explain the role of cohesion as a non-structural resource in the creation of texture in argumentative essays written by Saudi undergraduate students. It, however, must be taken into account that cohesion provides only a partial explanation of texture in any text or set of texts for there are, according to Halliday and Hasan (1976), two other textual components that contribute to texture namely the intra-sentence structure and the macro structure of discourse. The present study focused only on the use of cohesive devices, and is, therefore, limited in its scope.

The basic premise behind the function of cohesion in creating texture is the use of lexico-grammatical resources to create semantic relationships between different parts of the text so that an interdependence of one item on the other is developed and when this happens not only there is appropriate interpretation of the text but also a continuity in discourse which lends unity to the piece of text or defines it as a text. Following the notion of texture as has been operationalized for this study, cohesion in the texts of the Saudi undergraduate students can be seen as creating texture which mostly depends on Lexical cohesion followed by referential and conjunctive. The role of Substitution and Ellipsis is minimal though. This is supported by the results which indicate that 1798 out of 1954 (92.01%) CDs have been appropriately used. In other words, "the type of presupposition that provides texture in the text" (Halliday and Hasan, 1976 p.294) is predominantly identifiable in the texts. The proportion of overused CDs cannot be accounted for minimizing the role of cohesion in the creation of texture; they do, however, diversify the pattern of texture.

Halliday and Hasan (1976 p.296) refer to two types of texture: tight and loose. Tight texture refers to a textual instance where a "dense cluster of cohesive ties" is evident which indicates that "the meaning of the parts are strongly interdependent and that the whole forms a single unity" whereas textual instances where there are a few cohesive ties "perhaps one or

two" can be dubbed as loose texture. The texts of the Saudi students, from this perspective have visibly tight or close texture.

For one thing, the students attempted academic genre where they had to respond to a topic statement arguing in favour or against. The genre itself dictates the choice of register, and thereby cohesive devices in this regard (Martin, 2001). Writing, from both SFL and Contrastive Rhetoric Tradition perspectives, is embedded in socio-cultural context. The interaction between the writer and the reader is also very important alongside the lexicogrammatical devices that create the text. This interaction is strengthened by the system of tenor, field, and mode collectively referred to as register (Halliday and Hassan, 1976). In other words, register refers to a pattern of linguistic choices which are dictated by socio-cultural context or preference i.e. genre or a pattern of register choices (Martin, 2001). The argumentative essays, observed from this perspective, reveal a set of register choices that conform to the needs of the target genre. For example, frequent use of the third person pronouns (*they, them, their*) indicate an attempt to achieve formality and objectivity on the part of the writer which is an essential feature of academic writing (Hinkel, 2003; McCarthy, 1991). Similarly, the appropriate use of conjunctives by establishing ties with the previous information facilitate materialization of several rhetorical or academic functions such as cause and effect, exemplification, comparing and contrasting, supporting or refuting an opinion etc. Lexical devices despite the excessive use of repetition of the same item build the content of the essays. All these lexico-grammatical choices contribute to the creation of register which realizes the formation of texture in students' writing as well as make them compatible with the demands of the genre.

Nevertheless, as stated earlier, these students' texts do not represent a holistic picture of texture following certain constraints both of the concept and the present research. The former is about the exclusion of the intra-sentence structure and the macro structure of the texts from the study of texture. The latter pertains to some of the research foci that could not be included in the study owing to limitations of time and space. For instance, the relationship of cohesion and texture in and between paragraphs can reveal further insights into the patterns of texture. In addition, a study of the relationship among cohesion, texture, and quality of writing can unfold some interesting findings. The analysis of writing quality

in regard to cohesion use for the present study revealed that the referential and the lexical devices contributed significantly towards the creation of texture in students' texts. But the weak significant associations and differences in mean rank indicate that the exam scores do not have a very strong impact on writing quality when measured from the perspective of cohesive devices.

These essays were written by novice EFL writers in a specific context who were learning academic writing for higher education and occupational purposes. As such, expecting them to write to expert or the NS level would be fallacious in view of the curricular, academic, institutional, and socio-cultural constraints imposed on them. Their writing should be judged in a realistic framework of the context they are working. However, drawing on the insights from previous and contemporary research, appropriate measures should be taken to facilitate them progress from novice to good, good to proficient, and proficient to expert writers.

6.2. Discussion on research question 2

This section of the chapter provides explanations of the results obtained for research question 2 in (5.8) which seeks to find out how cohesion operates in the rhetorical structure of the argumentative essays. Following Hyland's (1990) framework for argumentation - the model used for this study, the results are discussed in the order of the framework i.e. the Thesis/Introduction stage, the Argument stage, and the Conclusion stage. Correlation analysis of the 18 cohesion categories with the 13 move rhetorical structure (4.4.9.2; 5.8) unfolded statistically significant relationships between most of the categories. Similarly, associations between the 13 moves in each of the three stages of the sample argumentative essays were positively significant. There were a few non-significant associations for both type of correlations though. The positive associations indicated the presence of co-referential element in the sample texts, and thereby cohesion. The subsections below further explain the use of cohesive element in the three stages and their respective moves of the argumentative writing for my study:

6.2.1. Cohesion in the Thesis/Introduction stage

The results show that 326 CDs were used in the Introduction which form 16.68% of the corpus (n=1954). The major stockholder move for CDs in Introduction was Information with

45% followed by Proposition (26%), Evaluation (13%), Marker (10%), and Gambit (6%) of n= 326 respectively. Lexical cohesion (50.61%) and Reference (38.65%) occupied most of the cohesive space in Introduction. Conjunction accounted for 8.28% of devices followed by an extremely low use of Ellipsis (1.53%) and Substitution (.92%). Correlation results for the moves in the Introduction stage revealed strong presence of cohesive element in and between the moves which points to the existence of coreferential element in this rhetorical stage.

6.2.1.1. Gambit

As Halliday and Hasan (1976) suggest that the first sentence of a text usually does not have any cohesive device in the absence of a presupposed item, Gambit being the opening sentence/s of Introduction may not have density of cohesive items. However, Gambit in the present study accounted for 6.44% of CD use in Introduction. There is possibility of the presence of the presupposing and the presupposed (6.44% of CDs in Introduction), especially in a compound or complex sentence as is evident in the examples below taken from students' text:

- i. *Culture is very important thing in every country*
- ii. *The life now is very different from the old days and there are so many things has change*
- iii. *Tests are usually made to measure how much students gain from that course.*

The general noun "thing" in (i) refers back to "culture". The writer attempts to move from the general to the specific to develop proposition for the topic "Saudi youth are losing their cultural identity". There are two devices in (ii) - the non-specific definite article "the" and the general noun "days" preceded by the epithet "old" - which refer back to "the life now". Example (iii) is an instance of density of cohesive devices in Gambit which is more direct in its relevance to the topic "There is too much testing in Yanbu Industrial College". Although the demonstrative "that" has been misused as there is no presupposed item, the collocational relationship between "course - tests" is very clear. as is between "made-measure-gain".

Hyland (1990 p.70) states that "Gambit is distinguished primarily by its arresting effect". This entails that the basic purpose of this move in Introduction or Thesis stage is to attract the attention of the reader rather than inform. It is, however, the writer's prerogative whatever strategy he adopts to seek attention of the readers. He can move from the general to the specific; relate an anecdote; cite a recount, give a personal example etc. Since the prime objective of the argumentative texts is to persuade, it is, therefore, crucial that gambit must relate itself to the proposition, whether at the specific or abstract level, which the writer plans to develop in the next few sentences. It is this contextual relationship of ideas between the gambit and the proposition that facilitates comprehension of the reader about the argument. In the present study, many students did not use CDs in Gambit but those who did used mostly Reference and Lexical devices to establish a semantic relationship between the presupposing and the presupposed so that their strategy of attracting the reader via general to specific detail is realized.

6.2.1.2. Information

Information had the highest proportion of CDs, mostly Reference and Lexical items, contributing 45.39% to the Introduction. This makes sense because this move in Introduction is like a bridge between the Gambit and Thesis or Proposition and contains background information for the thesis statement. The excerpts from students essays unveil some prominent trends in the use of cohesion:

- iv. *Our accomplishments, relations, and money are some of these factors. Their degree of directly affecting our happiness is different from a person to another. Sadly, nowadays we live in a society that is completely materialistic. Your weight on the society is equivalent to your account.*
- v. *Moving from one country to another [E1], you will see many different cultures, You can recognize people by their culture. In Saudi Arabia, we have our own unique culture identity. It's passing from one generation to the next [E1].*
- vi. *(There is a big difference between high school and college in all counts, especially in tests.) College students suffering from this fact. They were not prepared for such*

stress from the high school level of education. And that ('is' missing) why they are facing a serious problems in college.

The student writer in (iv) uses demonstrative "*these*" and repetition "*factors*" to establish semantic relationship with Gambit where he attempted to attract the reader by a general remark " *There are a lot of factors that can affect our feelings and happiness directly*". In the following sentences, the writer expands on the idea and employs deictic "*their*", non-specific demonstrative "*the*" , and Lexical repetition "*happiness*" and "*society*" to create cohesive ties between the referring and the presupposed items. The use of "*the*" and "*society*", however, need special mention: "*the*" specifies "*a society*" in the previous sentence implying that "*the society*" now refers to a society the writer/reader belong to and which is "*completely materialistic*". This semantic linking is further corroborated by an attempt to collocate "*weight*" with "*account*" (referring to bank account) which though inappropriate signals semantic association with the idea of "*completely materialistic society*". Moreover, the use of "*the*" is an instance of the use of "*Generalized the + noun*" (please refer to research question 3 for detail) which is typical of influence from Arab culture.

In example (v) the writer moves from the general to the specific in his attempt to relate the notion of culture with that of the Saudi so that he could develop his proposition for the topic. To achieve this end, he employs nominal ellipsis on two occasions "*another [country]*", "*next [generation]*" possibly as a strategy to exhibit maturity of expression by avoiding repetition of the same lexical item. On the other hand, the contracted "*it's*" though appropriately cohesive violates academic convention of not using full form. The deictic "*their*" coheres with "*people*" in the same clause - a typical referential function whereas, "*the*" specifies "*generation*" which has been signaled non-specific by the use of "*one*".

This student writer in (vi) also moves from the general to the specific to connect with the topic, although he refers to an aspect of the topic in the Gambit (bold bracketed). However, his use of the pronominal "*they*" to refer to "*college students*" helps him achieve an important academic function that of objectivity or detachment. In addition, there are three different types of lexical devices: repetition of "*school*" and "*college*" cohere with the same

items in the Gambit. The general word "*fact*" creates a tie with "*difference ...*" in the Gambit. "*serious problems*" collocates with "*such stress*" in the previous sentence. This move in the essay (Information) is significant also for the use of "*and*" in the beginning of the sentence, and thereby fulfills Halliday and Hasan's (1976) concept of additive conjunctive. "*And*" together with "*that is*" performs an important academic function of not only extending the previous idea but also suggesting cause and result relationship.

Information as a move in Introduction of the argumentative essays is common though it is not obligatory like the Proposition. Hyland (1990 p. 70) refers to the salient features of Information: "Realizations are largely drawn from a restricted class of illocutions which include definitions, classifications, descriptions, critiques, or 'straw man' arguments. It is possible that there is restricted variety of ways which this move may be realized ...". Analyzed from this perspective, the three examples quoted above can be categorized as descriptions stemming out of the Gambit. However, since the present study aims to identify the use of CDs in the RS of argumentative essays, ascertaining the typicality of these discourse acts in Information is relevant only for their study of the behaviour of CDs. The text in Information move seems cohesive and the cohesion devices facilitate some of the discourse functions expected from the writers of argumentative essays.

6.2.1.3. Proposition/Thesis statement

Proposition accounted for 25.76% of the use of CDs, mostly lexical and referential, in Introduction (n= 326) and was the second highest move after Information. Proposition or Thesis is the only obligatory move in Introduction which can be a sentence or may extend up to different sentences. Here, the writers presents the thesis statement around which the entire argument is supposed to develop. The examples below from students' essays show how cohesion was employed in the Proposition:

- vii. *Althoug some people may think money is not important for happiness, I believe that you can buy any thing with money including happiness.*
- viii. *I think Saudi youth are losing their cultural identity due to so many factors.*

- ix. *Although almost all educators support that college life must be challenging with this so many tests, there are many evidence show that it affect students grades and performance negatively.*
- x. *Some say cell phones are weakening the personal relationships, but my opinion this is not true for three reasons.*

In Proposition (vii), the writer incorporates both the opposing views and his stance on the topic which indicates that he will make claims and provide support to prove that money can bring happiness at the same time referring to those who believe otherwise. Repetition of the same items "*money*" and "*happiness*" has been employed to create coreferential relationship between the referring and the presupposed items in two sentences. Example (viii) illustrates the use of the deictic "*their*" which ties with "*Saudi youth*" and Lexical repetition "*factors*" which coheres with its antecedent in a clause in the Information move. Here, the Proposition signals the writer's position on the topic via formulaic "*I think*", and further that he will substantiate his claim and support by referring to two or more factors.

The example (ix) is like (vii) in its semantic function of presenting both the views of an argument. The dependent clause shows opposing stance whereas, the main clause seems to be the focus of the essay. Demonstrative "*this*" is used inaccurately; however, the pronominal "*it*" as an anaphor encompasses the whole idea expressed in the dependent clause. The collocations "*support - evidence - show; tests - grades- performance*" in this Thesis are clearly appropriate for the argumentative genre.

Proposition in example (x) is also of the same semantic meaning as (vii) and (ix). Lexical repetition of "*cell phones*" coheres with a similar item in the Information move and is topical in the sense that the phrase is part of the topic. The adversative "*but*" contrasts with the idea in the previous clause and signals what the writer proposes to hold. The demonstrative "*this*" ties with the previous clause.

The primary function of the Proposition is to develop a focus for the text based on its relationship with the topic. Usually, the writers take a stance to signal what they are going to argue about. Use of formulaic expression such as "*I think*", "*in my opinion*" etc. is typical as

is the use of topic related lexis. Sometimes, the writers include the opposing opinion to highlight theirs. Cohesion, as has been observed in students' Thesis statements, functions to create relationships between different parts of the Proposition so that the rhetorical functions needed to state or refute an opinion, contrast information, or sequencing an order of significant points for the thesis can be established. As Hyland (1990 p. 71) points out that the Proposition may be very "succinctly" developed or it may extend from the Information move or "contextualizing information can be embedded in the proposition itself". As can be seen in the examples above, the students did try to either extend some portion of the Information or contextualized it for the Thesis. However, one feature of Proposition could not be identified in the samples and that is putting the Proposition in the clause initial position. Since this is a feature of experienced writers (ibid), it probably cannot be expected from novice writers as of this study.

6.2.1.4. Evaluation

Evaluation is an optional move in Introduction which gives a "positive gloss" (Hyland, 1990 p.69) to the Proposition move. Most of the students did not use this move probably they were not formally aware of this. Nevertheless, Evaluation contributes 12.88% of the CDs in Introduction. Instances from students' texts are quoted below with Proposition in brackets:

- xi. *(In the last six years with the smart phone revelution it start to weaken the personal relationships.) Kids with cell phone mobile applications and Internet are all taking part in this issue.*
- xii. *(Social studies reported an increase of violent behaviors amoung young people who are adicted to violent video games.) These studies suggest that violent video games contributes to aggressive driving, increases bulling amonng children and lower sencetivity and compation.*

In example (xi), the writer attempts to support the Thesis which refers to the negative impact of cell phones. Three lexical items and a specific demonstrative have been used as cohesive devices to create semantic links between the ideas in the two moves. "Cell phone" is used as a synonym for "smart phone" mentioned in Proposition; "internet" serves to establish part-

whole relationship with "*smart phone revolution*", and "*this*" and "*issue*" are employed as a demonstrative and a general noun to tie with "*it start to weaken the personal relationships*". In (xii), a similar strategy as in (xi) is evident in the attempt to provide positive gloss to the Proposition. The demonstrative "*these*" links with "*social studies*" in Proposition, "*these studies*" can be identified as synonymous with "*social studies*", "*suggest*" collocates with "*reported*" in proposition, "*violent video games*" is repetition of the same also in Proposition, and "*children*" creates part-whole relationship with "*young people*".

As can be seen from these examples, the students who attempted to provide a "positive comment" (Hyland, 1990 p.71) mostly used variety of lexical cohesion and the demonstratives to establish both structural and semantic associations between the two moves.

6.2.1.5. Marker

Marker - an optional move in Introduction is the last move. Its main function is to "structure discourse by signposting its subsequent direction" (Hyland, 1990 p.71). In the present study, not every student used the Marker move and only 9.50% of the CDs in Introduction were found. The examples of Marker presented below substantiate how students applied this move in their argumentative essays:

- xiii. *In this essay I will discuss that can mony buy you heppiness?*
- xiv. *these resons are: video games make the person make interest, violent video games makes the person violent, and video games show unreal world which is effect the behavioral of a person.*
- xv. *However, Video games don't cause behavioral problems in youth and they have a lot of benefits such as releasing stress, learining and providing real life images.*

In (xiii), the formulaic expression "*in this essay I will discuss*" signals what the writer plans to expand on in the argument move. Use of lexical repetition items "*money*" and "*happiness*" not only cohere with identical items in the previous move but also reinforce the stance of the writer. Likewise, the writer again uses a formulaic expression "*these reasons are*" in (xiv) to

signpost the direction of discourse. "*reasons*" is repetition of an identical item in the previous move. Use of repetition "*video games*", "*person*", "*violent*", and the demonstrative "*the*" create cohesion between the referring and the presupposed items. In (xv), rather than using a formulaic expression as in the previous examples, the writer employs the adversative conjunction "*however*" to achieve the same rhetorical function of signposting the direction of discourse in the Argument stage. The key points of the main claim have been sequenced in the sentence where use of lexical repetition "*video games*" and "*youth*" and the pronominal "*they*" create semantic association both at the intra and intersentential level to indicate that there is unity and flow in the text.

Marker, as Hyland (1990 p.71) points out, "occurs more frequently in examination scripts and is often confined to a restricted class of formulae". The results of the present study thus collate with Hyland (1990) as the students' texts have been examination scripts and they do make use of formulaic expressions to direct the reader towards the focus of discussion. The use of adversative "*however*" also indicates that mature writers can use conjunctions to substitute for the functional use of formulaic language.

6.2.2. Argument stage

The Argument stage is the main part of an argumentative essay and can span over different paragraphs, and as such a higher number of cohesive items is expected as compared with Introduction and Conclusion stages which comprise of one paragraph each. Argument has four moves which can be repeated indefinitely because there can be more than one claims the writer makes and hence the possibility of more supporting detail: Marker and Restatement are optional whereas, Claim and Support are obligatory. A total of 1382 CDs was identified in this stage which forms 70.72% of the entire CD use in the RS of students' argumentative essays. The subsections below explain the use of CDs in relation to the move and rhetorical functions. The presence of moderate positive relationships between Marker and Restatement, Marker and Claim, and Marker and Support, and strong positive associations between Restatement and Claim, Restatement and Support, and Claim and Support indicated that the Argument stage was cohesive with strong existence of the coreferential ties in between the moves.

6.2.2.1. Marker

Marker being an optional move in the argument stage did not show consistent presence and depended on students' choice, and only 3.61% of the CDs in Argument could be discovered. The examples highlight some common illustrations of use by the students:

- i. *First opponents say that money can buy you desired goods.*
- ii. *I will talk about it in the following paragraph.*
- iii. *One of the benefit of video games is*

In example (i), the writer uses a temporal device "*first*" to let the reader anticipate a sequence of claims. There is use of lexical repetition "*money*" which is a topic word and refers back to a similar item in the previous sentence. Example (ii) has a personal reference "*it*" which ties with the idea referred to earlier. The writer employs lexical repetition of the same items "*the benefit*" and "*video games*" in example (iii) to cohere with the presupposed items stated previously.

These examples corroborate Hyland's (1990) notion of Marker where the writer signals the sequence of discussion at the same time connecting with the thesis statement. Writers either use temporal conjunctives as in (i) to signpost the series of events under discussion or formulaic expressions such as "*I think*", "*in the following paragraph*" etc.

6.2.2.2. Restatement

Like Marker, Restatement is also an optional move in Argument and was also inconsistently spread over the sample texts. Students used only 6.72% of the CDs in Argument in this move. The main function of this move is to reinforce the stance taken in Proposition so that the reader stays connected with the central idea of the topic as is shown by the examples from students' essays.

- iv. *Many people believe that money can buy you your needed like a powerful car or expensive smart phone.*

- v. *Work place play important role of culture extanch with people.*
- vi. *This seems to be true because there is an increase of murder crimes among young people.*

Example (iv) illustrates the use of repetition of "money" referred to in Proposition. Three instances of repetition "workplace", "cultural exchange", and "people" in (v), however, make the move quite dense in the use of CDs. In (vi), the writer adopts a different strategy. He uses the demonstrative "this" to tie with the thesis and then uses causal "because" to both justify and emphasize the veracity of claim made in the Proposition. "Young people" is a simple repetition of a previous identical item.

Since Restatement is an attempt of the writer at "foregrounding proposition" (Hyland, 1990 p.72), the choice of lexical repetition seems appropriate not only for creating cohesion between the parts of the text but also highlight the semantic meaning for readers' schemata of the central theme. However, the writers can resort to other cohesive devices such as the demonstratives and conjunctives as in (iii) to construct an appropriate Restatement.

6.2.2.3. Claim

Claim is the most important move in an argumentative essay because it "endorses the validity of proposition" (Hyland, 1990 p.72). It accounted for 17.51% of the CDs in Argument. The examples substantiate how student writers tried to persuade their readers:

- vii. *The idea that money can buy happiness is comon and mony people belive it.*
- viii. *Making good relationships with people can make the person happy.*
- ix. *Opponents claims that the result of a research indecates 90% of youth in Saudi Arabia did not lose their cultural identity. The research is insafficient and inconclusive.*
- x. *Violent video games have also showed an increase of aggressive behavior especially amonng children and young people.*

xi. *The too much testing in Yanbu Industrial College is affect on phsycology state of students.*

xii. *cell phones keep everyone in tech with his family or friends everywhere and any time.*

In example (vii) "*the idea*" is one of the rare instance of the use of a cataphor in the study and ties with "*money can buy happiness*" which has two items of lexical repetition identical not only with the presupposed in previous move but also related to the topic. The other repetitive item "*people*" also refers back to a similar one used previously while the personal "*it*" ties with "*the idea*" in the clause initial position. The next claim in (viii) is rather general in appeal with one item of lexical repetition "*relationships*". The writer attempts to refute a factual counterclaim in order to establish his in example (ix). The use of proper noun "*Saudi Arabia*" and the repetitive "*their cultural identity*" is synonymous with the topic. It is, however, in the second sentence that the writer introduces his claim by refuting the other. The use of demonstrative "*the*" and repetitive "*research*" not only tie with "*a research*" in the previous sentence but also specifies it for contrast which is duly supported by the use of emphatic words "*insufficient*" and "*inconclusive*". There are two items of repetition in (x) "*violent video games*" and "*young people*" which suggest that this claim is a continuity of similar ones in the preceding paragraphs. Example (xi) though syntactically inaccurate has repetition of "*the too much testing*" specified by "*the*". The last claim (xii) in these set of examples shows the use of repetition "*cell phones*" - topic phrase, and the pronominal "*he*" which ties with the indefinite pronoun "*everyone*".

Hyland (1990) points to three strategies that the writers use to build their claims in an argumentative essay. First, they may construct a statement which involves information which is assumed and shared by both the writer and the reader so that a sort of mutual agreement on the claim is developed. Example (vii), (viii) and (xii) support this strategy. Secondly, the writer may persuade his readers by developing a general statement and supporting it by fact or expert opinion as in (ix). Finally, they may use emphatic language to invite optimum agreement for the claim as in the second sentence of (ix) and in (x). Viewed from this, the examples of Claim suggest that these Arab students despite their language

problems in constructing syntactically accurate sentences can attempt a variety of rhetorical functions in making claims for their argument. The CDs in these claims serve to not only create cohesion but also facilitate the realization of these rhetorical functions.

6.2.2.4. Support

The Support move is the second mandatory move in Argument, and is highly significant because it serves to establish the logical relationships between the Proposition and the Claim. Quantitatively, it is the biggest part of an argumentative essay and thus, a high proportion of CDs can be expected. Support, as Hyland (1990 p.73) suggests, supplies "explicit reinforcement for the claim", and the writers can use a variety of rhetorical functions to substantiate the claims they have made and intend to support. As anticipated, the Support move accounted for 72.14% of the CDs in Argument stage of the essays for the present study. Sample instances are presented below for the use of CDs in different rhetorical or academic functions:

- xiii. *Although some people got their money from their parents, many [E1] worked hard to reach where they are now. I also believe that with bigger achievements, your happiness will be more, and as they say "a success will bring another success", so you can keep your happiness with hard work.*
- xiv. *for example when some girl is leaving her hijab and start to open her hair wich is against our cultur's becuse women in Saudiarabia known by thier Islamic clothes like abaya but if she will remove the abaya the Saudi identity will be gone.*
- xv. *on the other hand, there are people who see this as an innovative way and a chance to teach young people how to drive using semulation technology. In contrast, some people argue that these games are nothing but a kind of intertainment and to spend time and to have fun but what is fun about killing people, even if its veritual and unreal?*

In example (xiii), the writer tries to support his claim that money does not bring happiness. The use of "some people" which is a general word in the textual context contrasts with "many" and the use of nominal Ellipsis which strengthens the writer's attempt at persuasion.

Two repetitive items "*their money*" and "*their parents*" tie with "*some people*" for cohesive effect. The use of causal "*so*" functions not only to create semantic association between the cause and result of a proposition but also lends the supporting evidence its unity and persuasive effect. The repetitive item "*happiness*" refers back to an identical item in the previous clause. Example (xiv) is significant for the use of conjunctives for making the supporting evidence logical and appealing. The writer uses the additive "*for example*", the causative "*because*", and the adversative "*but*" to exemplify, reason, and contrast in order to support his claim. All referential devices, except "*she*" which is ambiguous, are appropriately tied with their antecedents. Lexical devices such as "*Islamic clothes*", "*the abaya*", and "*the Saudi identity*" cohere to enhance the semantic meaning as well as relationships. In (xv), the writer employs adversatives to mark contrast, and thereby persuade his readers to agree with him. The use of "*on the other hand*", "*in contrast*", and "*but*" illustrates this point. Lexical repetition through "*young people*" and "*simulation technology*" establishes cohesive links with similar items in the preceding text to give the text its flow and unity. Similarly, the demonstratives "*this*" ties with a whole idea in the preceding text while "*these*" tie with a previous mention of "*games*" as well as specifies the "*games*" it modifies.

The Support move is crucial because both the veracity and acceptance of the claim by the reader depends on how the writer supports his argument for the claim. Claims which are not based on specialist knowledge such as in the examples above can relatively be easily established as bearing a common ground with the background knowledge of the reader, and thereby made effectively persuasive with the help of different rhetorical strategies like exemplification, comparison and contrast, fact and figure etc. Claims relating to specialist knowledge such as topics from physics or space science may result in a huge gap between the presuppositions of the writer and the reader, and therefore, may appear challenging to accept.

6.2.3. Conclusion

Conclusion is the final stage of the essay and is generally a paragraph. Contrary to the popular notion of conclusion as summarizing the main points, conclusion in argumentative

essays "is the fusion of constituents of this genre" (Hyland, 1990 p.73). It functions to reinforce the main claim/s and the supporting evidence by reaffirming whatever has been presented by the writer. Conclusion is a four move stage and comprises of Marker, Consolidation, Affirmation and Close. Consolidation is the only compulsory move; the others are optional. 246 items were identified for their cohesive properties in the sample texts for the present study, and this makes for 12.58% of the CDs in the corpus (n=1954). There was strong positive correlation between the two adjacent moves Affirmation and Close, whereas, the association between the adjacent Consolidation and Affirmation, Consolidation and Close, were moderately positive. The correlation analysis of the individual cohesion categories in relation to the 13 move structure of the argumentative essays revealed that except for the conjunctives, most other cohesive categories had moderate to strong positive associations. Non-parametric variance results showed significant difference between the subcategories of Reference and Lexical cohesion which were, as a rule, subject to the frequency use of the subcategory.

6.2.3.1. Marker

The main function of this stage is to signal summing up of the argument and typically a restricted set of conjunctives such as "*in conclusion, in short, to sum up, therefore, thus* etc." are employed. The examples illustrate this point of view:

- i. *The bottom line is, there are things in life that a person should be thankful for.*
- ii. *In short, I do agree that*
- iii. *To sum up,*

Except for (i) which uses the formulaic phrase "*the bottom line is*" and a demonstrative "*that*" to tie with "*things*", the other instances begin with the temporal conjunctives "*in short*" as in (ii), and "*to sum up*" as in (iii).

These markers are typical of the students' writing probably because they regularly feature on writing textbooks, and therefore formally taught. Most of the students of the present study used temporals which not only signposted the beginning of Conclusion in their essays but

also established semantic relationship with other parts of the argument, especially those where the writers used temporals of sequence such as "*first, secondly* etc".

6.2.3.2. Consolidation

Consolidation is the only mandatory move in Conclusion, and as such contained the highest percentage (38.61) of CD use in Conclusion in the present study. Here are some excerpts from students' essays:

- iv. *Its not always about money, its about finding the true happiness which is something money can never buy*
- v. *Saudi youth are losing their identity culture due to life defolopment and improvement by studing outside saudi, working with other nationalities and using high technology divices.*
- vi. *video games have a lof of benefits such as releasing stress and anger learning new things and providing real life images*

In example (iv), the use of the personal "*it*" twice creates a semantic relationship with the Proposition of the argument and makes it explicit that the writer did not argue for the role of money in happiness. The lexical repetition of "*money*" and "*happiness*" coheres with previous mention of similar items to create cohesive bond in the text. In (v), the writer attempts to reinforce his argument by restating the main points and repetition of "*Saudi youth*", the syntactically inaccurate "*their identity culture* ", and "*outside Saudi*" have their antecedents in the previous move, and thereby establish cohesive links and semantic relationship of meaning. The same strategy of sequencing the main points of the argument in phrasal constructions is evident in example (vi) where there is density of lexical repetition.

These examples from the students' texts reveal that the students despite all their language limitations are familiar with the notion of consolidating their argument in the Conclusion stage.

6.2.3.3. Affirmation

Affirmation is an optional move which restates the proposition (Hyland, 1990). It accounted for 35.36% of the CD use in Conclusion being second to Consolidation. A few of the samples from students' texts are presented below for their functional and cohesive features:

- vii. *infact the player can develop himself from video games as video games sometime become emotional. the player also can learn some cultures from video games.*
- viii. *I'm with the increasing of tests and I think that's good way to improve efficiency of student in general.*

Example (vii) signposts the adversative "*in fact*" for an avowal of and emphasis on the stance taken by the writer and which he restates in this move. The use of repetitive items "*the player*", "*video games*", and "*emotional*" tie up with their antecedents in the previous move as well as in the present to give the text its semantic unity. Example (viii) shows repetition of the same lexical item "*tests*" which coheres with a previous mention, and the choice of general noun "*way*" to refer back to "*the increasing of tests*".

6.2.3.4. Close

Close is also an optional move and instead of referring back to the Proposition and claims, it suggests prospective aspects of the topic. 15.85% of the CD use in Conclusion was found in this move.

- ix. *I suggest that goveronment and educated people must interfere to prohibit the selling of violent video games.*
- x. *Therefore, in my opinion, Yanbu Industrial College must change their rule about number of tests.*
- xi. *So family must be careful with there children with they give them a cellphone.*

The prospective role of Close is evident in these examples which is marked by the use of the modals "*must*" and "*suggest*", and the causal "*therefore*" and "*so*". The use of "*suggest*" in

example (ix) indicates a future course of action the writer is proposing. "*therefore*" in example (x), necessitates the change in testing policy the writer wishes to happen. Similarly, "*so*" in (xi), justifies and emphasis parental care in matters of cell phone use by children. Other devices such as "*their*", "*they*", and underlined lexical items perform their typical role of establishing the relationship between the presupposing and the presupposed.

Research question 2 was generated to study the behaviour of cohesion devices in the rhetorical structure irrespective of the quality of arguments developed by the student writers. The analysis based on this approach revealed some useful insights in regard to the use of CDs in the RS of argumentative essays. Arabic discourse is significant because of lack of paragraphing and punctuation, and as Ayari (1996) points out Arab students' text organization is impacted by culture. However, the present study contradicts these findings as most of the students' essays fit in the rhetorical structure model used for the study. The study also contradicts Berzlánovich's (2008) who claims that argumentative texts owing to their focus more on the rhetorical structure than on the ideational use fewer lexical ties. In addition, the results findings also negate Wang and Cho (2010) who believe that the excessive use of premodifications adversely affects cohesion in argumentative texts. Except for a fewer instances of misuse and overuse (please refer to research question 1), most of the cohesive items have been used appropriately.

Despite a concerted effort, the researcher was unable to find a single study either in the Arab context or outside which has used Hyland's (1990) framework of the rhetorical structure to study cohesive properties in argumentative essays. It is, therefore, an assumption of the researcher that the present study might be the first one to have analyzed cohesion in argumentative essays from this perspective. As such the results evident in each stage and move of these argumentative texts could not be collated and contradicted with other studies. Nevertheless, the results indicate that the use of cohesion in the RS serves twofold function: establishes cohesive links to give the texts their semantic flow and unity, and facilitates realization of the rhetorical functions that are typical of the rhetorical stage and move in which the cohesive items operate.

The use of Hyland (1990) framework for cohesion analysis is, however, not without its limitations and, thereby, has certain implications for future research. For instance, the quality of argument in the sample texts was not measured; hence, there is scope for further research from this perspective which can investigate relationships between cohesion and rhetorical features of the argumentative texts. Furthermore, this framework can be compared with another framework such as that of Toulmin (2003), for instance, to study cohesion in argumentative essays. A further leap could be a study based on comparison between two or more genres such as the narrative and descriptive for cohesion analysis in the rhetorical structure. The findings are expected to benefit the teaching and learning processes involved in academic writing.

6.3. Research question 3

This section explains findings obtained for research question 3 through structured questionnaires which measured students' and teachers' perception, and personal interviews attended by EFL teachers of academic writing in Saudi Arabia.

6.3.1. Structured questionnaires

The results of the structured questionnaires revealed statistically significant differences in the mean scores of the individual factor on each questionnaire as well as between the two questionnaires. There were also significant differences between the perceptions of the teachers and the students for the individual items on these factors as there were only a few items which received a similar response from the participants. These results are consistent with other research findings which report differences between teachers and students' beliefs (Barkhuizen, 1998; Nunan, 1996). The subsections below provide comparative discussion on both the questionnaires:

6.3.1.1. Teaching and learning of academic writing (TL)

This factor included 13 items which were designed around themes that elicited different facets of teaching and learning of academic writing in Saudi EFL context. The teachers and the students showed both agreement and disagreement in their response to different items which revealed their attitude towards a particular aspect of the factor. For instance, majority

of the teachers' belief that "*students write in English for academic purposes quite often*" (TL1) was contradicted by students who did not agree with this idea. Students' opinions seem more valid than teachers' because several research studies report lack of extensive exposure to writing in Arab EFL world (e.g. Saud, 2015). Another reason is that academic writing is introduced mostly at the undergraduate level which is not very common in Saudi universities where Foundation level students are taught General English courses before moving on to their subject specialism. However, teachers' perception about "*students also write in English for non-academic purposes*" (TL2) collates with students' beliefs on the scale of disagreement. This reveals that students do not have opportunities of writing in English for general purposes. Saudi Arabia is a monolingual society where all social, business, and workplace communication is in Arabic. Despite the presence of a large number of expatriates, majority of the Saudis rely on their mother tongue for communication with non-Arabs. Any need whatsoever is there for English does not impose immediacy for English language learning for social purposes.

The results for the item "*students feel gratified when appreciated for their writing skills*" (TL3) are contradictory for the teachers mostly agree with the idea. Students' disagreement is followed by a large proportion of neutral responses which indicates that either there is not such practice in their context or they are not familiar with the notion of appreciation for good writing practices. It seems to refer to a gap in teachers' or students' understanding of the classroom dynamics where motivational strategies or feedback system on students' performance are either not practiced or are not effective. A high level of disagreement is shown by both on "*students like to do collaborative writing tasks*" (TL4). This seems to be a contradiction in terms for Arabs' is a collectivist culture (Jandt, 1995). However, it appears that, as far as writing pedagogy is concerned, there may be a lot of challenges for the teachers in task management which involves pair or group work or project writing. At one level, it stems from socio-cultural paradigm of honour and face saving. As a teacher of academic writing, the researcher has personally observed that the weaker students avoid working with the better ones to avoid embarrassment while the proficient students try not to work with the less proficient lest their performance should be affected. In addition, the students also disagree with the statement "*students like to work independently*" (TL5) while the teachers' response for agreement is slightly higher than disagreement and if the 27

neutral responses are added, the weight of perceptions moves towards disagreement. Although exact causal explanation of this finding cannot be presented for this is not one of the aims of the questionnaires, the results appear paradoxical. Students should indicate willingness to work either as an individual or a team which they do not. A plausible interpretation of this phenomenon could be that perhaps both the teachers and the students feel that the students are not reasonably motivated and prepared for writing tasks which they feel are challenging to them. This is a significant revelation and needs further probe into the causes which can provide insights for effect remedy of the situation.

Feedback on writing performance is one of the most crucial variables to ascertain the extent of learning and success of the writing programme. A majority of the teacher and the student respondents disagree that "*students receive constant feedback and support from teachers*" (TL6). The results point to an alarming situation where one of the most important feature of writing pedagogy is being overlooked. In the absence of effective feedback delivery system, writing course objectives cannot be achieved. So the obvious implication is a comprehensive review of the course design and course delivery programme to identify factors that impede teacher feedback as well as seek remedies for improving the dismal situation. Similarly, there is a high level of disagreement and neutrality from the students about "*positive feedback from family and peers*" (TL7). The teachers, however, show a higher proportion of neutral response and an almost even level of agreement and disagreement. The results reveal two significant things: the students are not involved in any informal academic discourse outside the classroom; and the family does not follow up on students' educational matters seriously. A research endeavour that could investigate the role of peer and family feedback on learning academic writing would bring forth some useful insights into the scenario for the benefit of the learners.

Writing has been described as the most complex language skill (Nunan, 2003). One of the challenges for the students of academic writing is their lack of exposure to a variety of academic or rhetorical functions which make up for a cohesive and coherent text in conformity with the expectations of the academic discourse community. Responding to "*students are explicitly taught academic writing functions*" (TL8) a high level of disagreement and neutrality are observed among the teacher and the student respondents

which indicate certain gaps in academic writing pedagogy and course design. It seems that academic writing course design and textbooks do not include explicit focus on academic functions or if there are they are restricted to the stereotypical type as has been supported by the results of the text analysis for the present study where a limited range of rhetorical functions such as exemplification, contrast, and cause and effect are observed. Another factor could be the lack of either training or preparedness for teaching academic writing at the undergraduate level where teaching of academic functions should form the core of pedagogic focus.

Motivation in students is also a very strong determinant of success in second language learning. An item on the factor (TL9) "*students are motivated enough to learn writing skill for academic purposes*" finds agreement from the teachers but a high percentage of disagreement and neutrality from the students. Since the teacher respondents belong to a wider EFL body in the Arab context, their responses may reflect their contextual situation while the student respondents are associated with the research setting of the present study and speak out what is generally held about Saudi EFL students - low levels of motivation. But understanding causes of low motivation among students needs a separate research initiative which is not the focus of this study. Suffice it to say that these results collate with most research studies on motivation in Arab EFL scenario (Javed and Umer, 2014), and issues with students' academic writing can be, to a certain extent, attributed to lack of motivation. One of the reasons for this lack of motivation for learning academic writing could be that, perhaps, students do not feel "*academic writing is useful to their present and future needs*" which was the next item on the factor (TL10). The students mostly disagree or stay neutral while the teachers' majority disagree. The response from both sides contradicts the notion of academic writing which, by default, not only helps students gain success in the programmes they are enrolled in but also prepares them for further studies and to a certain extent for their professional life. The results suggest that there is perhaps a serious need to redefine the concept, definition, and role of academic writing and the teachers and students should be prepared to follow academic practices in conformity with the revised concepts and roles as are, generally, practiced in academic settings across the globe.

Beside motivation, sharing of learning experiences, both positive and negative, are significant in the language learning process. The last two items on the factor (TL12 & 13) have been generated to measure if the students "*freely express their positive and negative learning experiences with peers*". The students either disagreed or stayed neutral and so did the teachers. Saudi students have been observed as shy or introvert in matters of sharing personal achievements especially the negative ones for face saving and self-esteem. This lack of sharing inhibits positive learning because when a student shares, for instance, a negative experience he not only finds advice for improvement but also voices a concern for remedy.

6.3.1.2. Arabic language and culture (ALC)

This factor comprised of 5 items on the questionnaires for teachers and students with the objective of measuring the role of L1 and culture in academic writing. Majority of the teachers and the students agree that "*writing in English is the same as writing in Arabic*" (ALC1) which is a contradiction in terms. Many research studies (Jandt, 1995; Koch, 1983; Ostler, 2002) have mentioned noticeable differences between the two languages in regard to lexico-grammatical, rhetorical, and discoursal features. Perhaps, the teachers in Arab EFL mostly comprise of non-Arab expatriate teachers whose knowledge about the Arabic language is not comprehensive enough to appreciate the differences between the two languages. There is, therefore, need to introduce teachers in the Arab EFL world to the linguistic and rhetorical properties of the Arabic language which is expected to help their students learning needs in an effective way.

The issue of L1 transfer is common across most EFL/ESL contexts, the incidence and frequency of effect may vary from one setting to another though. Teachers mostly disagree that "*students use knowledge of Arabic while writing in English*" (ALC2) - a feature which is neither supported by previous research nor the textual analysis of the present study. Students also disagree with the statement and a slightly lower proportion remain neutral implying they are unsure about such use or cannot identify L1 influences. As suggested previously, Arab EFL teachers especially those with no background of Arabic need to be introduced to the Arabic language for effective teaching practices. However, the teachers and the students'

belief that "*good writing skills are highly valued in Arab culture*" (ALC3) reflects an appropriate response which though that of disagreement and neutrality collate with the findings of the present research as referred to in research question 3 and many other studies. Arab culture is basically a culture of oracy and writing has a secondary status in it. Secondly, writing especially English is not extensively practiced except for the specialist purposes, and is not a lay man's domain. Dominance of oral discourse over written is reflected in academic writing and other genres where writers incorporate many of the features of spoken discourse.

The factor (ALC) also attempted to see via two statements what the teachers and the students' perceptions are about the status of "*argumentation*" (ALC4) and "*critical judgment*" (ALC5) in Arab culture. The students clearly disagree or show neutrality while the teachers are higher on the neutral scale and almost even on agreement and disagreement. In fact, Arab culture is, as described by one of the teachers responding to an interview question for the present study, patriarchic implying that power relations are pre-established at all levels of social hierarchy. As such, a son will not argue with his father or a student will not with his teacher. Such a social arrangement discourages independent opinion and critical judgment, and can be viewed as contradicting with the individualistic and low contact English speaking cultures where argumentation is openly accepted and appreciated.

6.3.1.3. Language knowledge (LK)

Language knowledge factor with 5 items in it was created to get a general idea about the teachers' and the students' views about students' knowledge of language in the formation of academic texts. Results for "*students have sufficient vocabulary to help them write in English*" (LK1) from the students do not collate with responses from the teachers who mostly agree with the statement. In view of the text analysis results for the present study, students' perceptions appear more relevant than the teachers'. However, the views of both can be assumed as relative to their contexts. The students demonstrate a very limited range in the choice and use of lexis for their argumentative writing. The excessive use of lexical repetition of the same item (n= 741) supports this point. On the other hand, since teachers probably identify themselves with a wider Arab EFL context. their beliefs about students'

vocabulary may be true to their contexts or their notion of lexical range of students is based on contextual realities which acknowledge limited range as acceptable measure for the Arab EFL students. Nevertheless, Arab EFL students as that of this study need serious help with vocabulary development so that they could use an appropriate range of academic lexis in the creation of genre specific discourse.

The teachers and the students disagree with the statement "*students use knowledge of grammar to write correctly in English*" (LK2). The students also show a higher level of neutrality. The results are also supported from students' texts which though did not focus on the grammatical accuracy of their writing and, therefore, empirical evidence cannot be supplied, but as a general comment, the texts show grammatical inaccuracies including those of spelling and mechanics which affect the syntactic structures of the discourse. In regard to the statement, "*students know how to write different types of sentences*" (LK3), most of the teachers agree while the students disagree. This again is relative. The textual evidence from the present study shows that students do attempt a variety of sentence structures such as the simple, compound, complex and at certain instances compound-complex also. But certain inaccuracies, for instance, in regard to use of grammar, word form and order are observed during the course of analysis which suggests that there is need to focus on the teaching of micro-level features of writing to help students write academically appropriate sentences.

Teaching students how to write a topic sentence or a thesis which signposts the topic and the controlling idea is one of the typical features of teaching essay writing in academic settings. In response to the statement, "*students know how to write topic sentence and thesis statement*" (LK4), most of the teachers agree and a good number of them stay neutral. However, the students mostly disagree with the item. Teachers' agreement seems justified because most textbooks and writing course designs have explicit provision for the topic/thesis statement. From students' perspective, it appears that they find it really challenging to construct a statement that signals the main focus or claim/s of the essay. The present study cannot comment on the appropriacy or quality of the thesis statement since it focused only on the use of CDs in the texts. But, during the course of cohesion analysis, thesis statements were observed in almost all the texts which suggests that the students are

familiar with the notion of the thesis statement as a crucial element of argumentative writing and that they have been instructed how to write one for argumentation.

Supporting detail in any essay especially, argumentative is important because it persuades the readers to agree with the writer's claims. A statement "*students know how to write supporting detail for the topic sentence*" (LK5) was included in the factor to see what teachers and students beliefs are about the development of supporting detail. The students mostly disagree which suggests that writing details to support their claims for the argument is challenging for them. The teachers, on the other hand, show a mix response. A higher percentage disagrees with the statement but a slightly lower percentage believes that the students can write supporting detail. Evidence from the texts reveal that most of the students provide supporting detail for their claims as most of the CDs in the RS of their argumentative essays (n= 997) were identified in the Support move. but since the study did not analyze the quality of the supporting statements, empirical evidence in this regard cannot be supplied.

6.3.1.4. Text organization (TO)

This factor contained 3 items and were designed to gauge what teachers and students think about text organization using different rhetorical patterns such as exemplification, cause and effect, comparison and contrast, fact and figure etc. Most of the teachers agree that "*students know how to write different types of paragraphs*" (TO1). The teachers' opinion is justified in view of the fact that these rhetorical patterns regularly feature in textbooks on academic writing and are part of the course design, especially that of the researcher. However, a slightly lower percentage of both disagreement and neutrality is also observed which suggests that the teachers either believe that the students are not familiar with different types of rhetorical patterns or are unsure about their ability to do so. On the other hand, the students clearly disagree with the statement. Their texts unveil that the students mostly depended on exemplification, cause and effect, and to some extent contrast as the use of "*for example/instance*", "*because*", "*but*", and "*however*" is frequent in the sample texts. Similarly, majority of the teachers agree that "*students know how to write cohesive and coherent paragraphs*" (TO2). The students, on the other hand, disagree or stay neutral. The

teachers' belief is supported by the results of cohesion analysis for the texts where a high proportion of the CDs has been appropriately used. Coherence was not part of text analysis; hence, empirical evidence of the extent to which these texts were coherent, cannot be furnished. However, assuming that cohesion enhances text coherence, it can be inferred that most of the texts were coherent in their textual context. Students' disagreement indicates that probably they are not formally familiar with the notions of cohesion and coherence which entails that they should be explicitly taught these textual features for better academic writing. The third and last item on this factor was "*students know how to write argumentative essays*" (TO3) which most of the teachers agree with while the students' majority disagree and a high proportion remain neutral. Results of text analysis for cohesion support teachers' perceptions but do not collate with students' beliefs. Especially, analysis of cohesion in rhetorical structure reveals that most of the students are able to produce an argumentative text. However, the study did not analyze the rhetorical structure for features other than cohesion, the quality of overall argumentation cannot be stated with certainty.

6.3.1.5. Cohesion (COH)

This factor is more directly linked with the focus of the study and 8 items were created to get a general impression about the use of cohesion devices by the students in their argumentative essays. Majority of the teachers disagree that "*students make appropriate use of pronouns*" (COH1) and a little lower proportion stayed neutral. In contrast, the students' level of disagreement and neutrality was almost evenly balanced. The results seem to both support and contradict the results of analysis for referential cohesion in students' essays. The fact that referential cohesion is the second most commonly used device after Lexical cohesion and a high proportion is appropriately used refute teachers' and students' perceptions. And the empirical evidence that referential cohesion has the highest proportion of inappropriate use and the second highest percentage of overuse indicates that students have problems while using reference items as cohesive devices such as the ambiguous referent, wrong pronoun number for the antecedent, placing a pronoun between the noun and verb phrase due to negative transfer etc. The obvious implication is the focus on teaching pronouns explicitly as cohesive devices rather than as grammatical items so that the students could grasp the notion of referential cohesion in context.

Items COH2 and COH3 on this factor "*students make appropriate use of coordination*" and "*students make appropriate use of subordination*" received a high percentage of agreement and a slightly lower neutrality from the teachers. This implies that the teachers think the students can use conjunctives appropriately in their writing, and conjunctive analysis for the texts supports teachers' opinions. The students, in contrast, do not agree with both the statements. It seems that they are probably not familiar with coordination and subordination formally. It may be that they have limited knowledge about the use of conjunctives such as restricted to "*and*", "*but*", "*because*" and the like which feature in textbooks on writing. Although appropriate mostly, the dispersed and limited range of conjunctives seen in students' texts necessitates explicit teaching of conjunctives for creating cohesion so that the students are able to establish a wide range of semantic relationships in their texts.

The teachers are almost evenly divided in their agreement and disagreement with "*students make appropriate use of articles/determiners*" (COH4). A relatively lower percentage is neutral. The students, on the other hand, show clear disagreement and a little lower proportion of neutrality. Perceptions about the use of article "*the*" from both sides is justified not only because of its complexity of use but also because of the cultural and L1 influences. The use of the definite article in Arabic is different from that in English which accounts for sometimes specifying a general noun without any previous mention or placing where an omission is needed. One reason seems to be the teaching of "*the*" as a grammatical item like that of the conjunctives mentioned earlier. Since "*the*" is notional as a cohesive item, therefore, teaching of "*the*" should be modeled as such.

Two statements "*students make appropriate use of collocations*" (COH5) and "*students make appropriate use of repetition of ideas*" (COH6) aimed to measure teachers and students' opinions about Lexical cohesion. Most of the teachers agree with both the ideas while a relatively smaller number remains neutral. These perceptions contradict results of lexical cohesion analysis of students' writing which reveal a very high proportion of repetition of the same item as compared with other devices for reiteration such as synonyms, superordinates, and general words. Similarly, a very low percentage of collocations is observed in students' essays. Students' perceptions also do not support results of the text analysis since majority thinks they can use collocations which they do not demonstrate in

their texts. Similarly, their belief that they cannot use repetition is supported by the use of lexical repetition but contradicted by the low frequency of other types of reiteration. Lacks in the use of Lexical cohesion, especially the excessive dependence on repetition of the same lexical item points to relevant changes in writing curriculum and pedagogy.

The last two items on the factor "*students replace a word or a phrase or a clause for variety*" (COH7) and "*students use ellipsis (omission of a word, phrase or clause)*" (COH8) sought to collect teachers and students' beliefs about the use of Substitution and Ellipsis as cohesion devices. Majority of the teachers agree that the students can use Substitution and Ellipsis in their writing while the students either disagree or stay neutral. Despite their very minimal use in the text data, the students are able to use both the devices appropriately which support teachers' perceptions. The very restricted use, on the other hand, justifies students' perceptions as they do not seem to be using these devices. But since both Substitution and Ellipsis are less common in academic writing, their minimal use in the corpus of CDs is insignificant in the creation of cohesion for texture in the present study.

6.3.1.6. Rhetorical functions (RF)

The last factor on the questionnaires had 16 items which aimed at measuring teachers and students' perceptions about the use of different rhetorical functions in argumentative essays. Majority of the students remained neutral and a little lower percentage disagreed that "*students use counter arguments while writing in English*" (RF1). The teachers, however mostly agree with the statement. The high percentage of neutral response from the students indicate that they are probably not familiar with the notion of counter-argument. The data from students' texts reveal that they do use counter-arguments in order to refute an argument. In response to problem-solution pattern in writing, most of the students show disagreement with or neutrality for "*students express problems related to the topic*" (RF2) and "*students write solution to these problems*" (RF3). The teachers also believe that students cannot use this pattern in their writing. As a matter of fact, the students do not appear to be using this rhetorical strategy in their essays in the present study. However, the teachers agree that "*students write logically that appeals to the reader*" (RF4) which entails that students' arguments are persuasive and supported by contextual evidence. The students,

on the other hand, either disagree or stay neutral which suggests that they are not comfortable in producing logical arguments. In addition, the teachers believe that the students are "*explicit in their expression*" (RF5) as well as "*suggestive in their expression*" (RF6) which is contradicted by the students. This means that according to the teachers, the students can build explicit as well as abstract semantic relationships among different clauses to express a variety of ideas. The use of conjunctives in the students' texts indicate the presence of explicit relationships; however, the level of suggestibility was not clearly visible because the study primarily did not focus such an analysis and whatever is being suggested is the general observation of the researcher as the sole rater of students' texts.

Cause and effect and comparison and contrast patterns of rhetorical organization are common in argumentative essays. Most teachers agree while the students disagree that the students use "*cause and effect*" (RF7) and "*comparison and contrast patterns effectively*" (RF8). The textual evidence from the students' essays supports teachers' perceptions as a high frequency of the adversative "*however*" and "*but*", and the causal conjunctives "*because*" and "*so*" is seen in students' texts. The statement that "*students use examples to substantiate their point of view*" (RF9) is not supported by the teachers and the students who either disagree or stay neutral. This contradicts text analysis results where exemplification is the main rhetorical strategy used by the students, and the additive "*for example*" is the second most frequent conjunctive after the causal "*because*" in their essays. Developing "*an independent opinion*" (RF10) is a prominent feature of argumentative essays and both the teachers and the students disagree with the item which means that developing an independent opinion about a topic or phenomenon is quite challenging for the students and they need some sort of prompt to create one.

Argumentative essays are build around a central illocutionary idea which can invite agreement as well as disagreement. Hence agreeing and disagreeing are the two extremely important rhetorical strategies that writers of argumentation adopt to make their texts persuasive. The teachers mostly agree with the items "*students know how to agree with a proposition*" (RF11) and "*students know how to refute a proposition*" (RF12) but there is also a significant level of disagreement and neutrality which indicates that the students' ability for these academic functions may vary from one context to another. The students

disagree with both the statements but there is a higher proportion of neutral responses for the latter. Likewise, "*taking a stance*" (RF13) and "*substantiating*" (RF14) it form the core of argumentation because a thesis statement is ambiguous in the absence of writer's position which later leads to making claims for the essays. Substantiation involves the use of different rhetorical strategies to support or refute the claim in the Support move of the essay. The teachers agree while the students disagree or remain neutral. The textual evidence from students essays irrespective of their quality, however, supports teachers' opinions as the student writers have been observed generating a thesis statement and providing support to validate their claims. The teachers also agree that the students use "*facts and figures to illustrate a point of view*" (RF15) - a belief not supported by students' writing. Similarly, they also agree that "*students know how to synthesize information*" (RF16) which collates with the results of text analysis. Majority of the students tried to write conclusions for their essays and the use of the temporal "*in conclusion*", "*to sum up*" etc. indicates that they are formally familiar with the Conclusion move. The students, however, do not agree with both "*use of facts and figures*" and "*synthesis of information*".

6.3.2. Teachers' interviews

30 EFL teachers from three Saudi universities participated in the three open-ended interview questions created with the view to eliciting teachers' opinions about the main themes that emerged in regard to the review of literature and study gaps.

6.3.2.1. Interview question 1: Do you think Arab EFL students use cohesive devices effectively to create appropriate academic texts such as the argumentative essays? If yes, what strengths and weaknesses have you found in students' use of cohesive devices?

A slightly higher percentage of the teachers believe that the students do not use cohesive devices effectively to create argumentative essays and so a higher proportion of weaknesses in the use of cohesion is identified as compared with the strengths. This is in line with the general notion about Arab EFL students' writing proficiency. The teachers refer to the limited range of cohesive devices the Arab students use in their writing; for instance, a teacher reports: "*They only use the simple cohesive devices; they are 'and' and 'but'. But when it comes to complex and complicated cohesive devices such as 'however. in addition.*

furthermore or in contrast', they don't." Students' texts reveal a limited range of the use of cohesive devices as referred to earlier. In addition, some teachers point out that Arab students make frequent use of only those CDs which are common in both languages such as the additive "*and*", "*for example*", the adversative "*but*", the causal "*because*", and the temporal "*first*", "*secondly*" etc. which is supported by the results of the text analysis.

A few teachers also refer to the overuse of CDs which is empirically supported by the results such as the lexical repetition: "*We've found that they excessively use repetition of the lexical item.*" Some students have been reported to make use of their cognition while using CDs "*But most of the time their memory works for them like they may memorize how to use that cohesive device but if just try to change the context they lose that memory and they may commit some mistakes*". On the other hand, some teachers suggest that the problem is not with CDs but with vocabulary: "*The ideas are stuck in their heads because they can't formulate them in English*". This implies that the students are challenged when they have to organize the text using CDs. They seem to have the ideas but no general statements to bring them together for their descriptive vocabulary is extremely precise. The texts unveil that they mostly write around the topic and repeat phrases before the content and start giving examples using "*for example/instance*". They pick the ideas more than once either to highlight the importance of the idea or to convince the reader or simply because they do not have suitable vocabulary to help them formulate their ideas. Some teachers think that background schooling is responsible for writing weaknesses including the CDs: "*I think the Arab students are not trained from the beginning to organize the building blocks in an orderly manner and construct an argument in a cohesive and coherent way*".

6.3.2.2. Interview question 2: Do you think Arab EFL students are familiar with the rhetorical structure (RS) of the argumentative essays? How effectively, in your opinion, do they use cohesive devices (CDs) in the rhetorical structure to achieve different argumentative functions (AFs)?

As for Interview question 1, for Interview question 2, majority of the teachers believe that Arab EFL students are not familiar with the rhetorical structure of an argumentative essay. The teachers comment on the use of CDs in RS in terms of grammatical and lexical

cohesion, contextual factors that affect the choice of these devices, and the overuse they have observed in students' writing. The teachers also express their opinions about the RS pointing towards the main moves of the argumentative essay such as the Introduction, thesis statement, Support, and Conclusion. They also refer to some other elements such as an impact of culture i.e. oracy. But the highest response seen is for students' inability to use moves appropriately in their essays. A slightly lower proportion of the teachers than this is "unsure" about the use of academic functions in the RS which indicates that they are either not familiar with it or they have not analyzed RS from this perspective.

A teacher respondent pointed out that the students are formally taught different elements of the rhetorical structure but they fail when it comes to actual use of the concepts. Another teacher has a similar comment to make: *"But when it comes to enacting them or operationalizing them in their writing there comes the problem"*. Probably, they employ their oral skills because *"they have less substance and more words"*. As for the use of CDs in RS a teacher observes: *"They use both lexical and grammatical cohesion devices, repetition of the key words and use of proper pronouns, use of these demonstrative pronouns 'this', 'that', 'these'. These are sometimes used in an excessive number and sometimes in an inappropriate way"*. This observation is in agreement with the textual evidence received from textual analysis as there have been instances of both misuse and overuse.

Some of the teachers believe that argumentative writing is quite challenging for the Arab students because it involves logical and coherent reasoning as well as persuasion, and therefore, demands maturity in linguistic style: *"I feel that academic writing needs much higher cognitive level of understanding and it is cognitively demanding for the students"*. The teachers also point to students' problems with thesis statement, evidence and support which they cannot properly substantiate. The teachers believe that the students, in fact, do not know how to argue for a claim.

In addition, teachers also point to the negative transfer that comes from Arabic and affects the use of CDs in RS of the argumentative essays: *"Usually the Arab learners have been observed to transfer the stylistic features of the L1 to the target language. For instance, they tend to write long sentences with coordinating conjunctions. They often talk about the main*

topic and repeat the phrases before stating the main point". An obvious implication of this phenomenon is the limited use of only those CDs which are used in both languages as has been referred to above which means that students' texts are constructed around a limited set of semantic relations discernible through a very few academic functions: "Students generally use cohesive devices in the beginning of the body paragraphs such as 'first', 'moreover'. They also remember phrases such as 'in conclusion' and are also familiar with coordinating conjunctions but the use is limited".

One of the teachers points out that *"teachers are not well trained to teach RS"* which is supported by 21.01% of the "Unsure" responses from a total of 38 pertaining to the use of academic functions in the rhetorical structure.

However, there was a different observation from another respondent: *"they hold an opinion and argue very effectively; they can build the structure of an argument with the help of cohesive devices, but fail to produce argument when asked to write on topics which are alien to their culture"*. The topics of the sample texts for analysis conformed to their specificity with the cultural context with the result that students were able to produce argumentative essays of word length that ranged from 266 to 525.

6.3.2.3. Interview question 3: What would you suggest to help students make effective use of the cohesive devices in academic writing?

The teachers were requested to suggest measures for improvement in the use of cohesive devices in academic writing. The highest percentage felt that reading is the most crucial missing link that impedes the effective use of CDs in students' writing. This is also evident in the limited lexical range shown by high frequency of repetition of the same lexical item in students' argumentative essays. A respondent observes: *"I think reading - both intensive and extensive- of the authentic text of the written material will help them to imbibe the true structure of the language"*. A similar comment further substantiates the need for developing reading habits among Arab EFL students: *"to remedy this issue they need to read more in English because reading in English enriches the vocabulary and also exposes them to styles of writing"*. The same percentage as that for reading also called for curricular changes to help the students make better use of CDs: *"So there is a gap between the course expectations*

and the students' level. I haven't seen a single course and a single part of the syllabus which focuses specifically on the cohesive devices". The curriculum should be sensitive to the fact that the students once reach the university level, need to write a lot. So mention of cohesive devices in academic writing, basically entail a focus on writing. It is part of writing. So, if in general, writing is not being taken care of the elements which are specific to aspects of writing are also not being taken care of.

The teachers also mentioned "*practice*" and "*pedagogy*" as important variables in this context. For instance, the following comments illustrates this point: "*so why don't we teach students these cohesive devices explicitly giving them ample examples because most of them they know them* " and "*The more they practice, the more chances are there that they become proficient writers*". First, there is need to train the students how to write a cohesive paragraph. They should be made to understand that cohesion is semantic not structural. In this context, focus on language universals can prove useful. Cohesion, in academic contexts, should be taught in relation to domain such as the humanities adopting a genre-based approach which trains students to adopt appropriate register for the target texts, thereby facilitating the appropriate use of CDs. There is also the need to focus on supra-sentential i.e. discourse features and flow of thought and ideas.

A good number of teachers also refer to the contextual factors that can be counted upon such as revamping of the examination system, and student placement in writing courses should be on level appropriate. Students should be motivated to write. More research into writing problems is needed to identify areas of improvement. There is also need for Writing centers so that EFL support systems could be made effectively functional. When we empower a student in the class we give him the power to express himself, to defend his ideas.

The results of the questionnaires and interviews reveal some significant trends as far as teachers and students' perceptions about the teaching and learning of academic writing in Arab EFL context are concerned. There have been statements where both reveal a common understanding; however, they happen to disagree on most occasions. Following Nunan (1989), the differences between the pedagogic and learning experiences can be negotiated between the teachers and the students for an effective learning experience for the learners

because “learners do not learn what teachers teach in the simplistic one-to-one way implied by many curricular specifications and assessment tools” (Nunan, 1993, p. 2).

Similarly, data from the text analysis collates as well as contradicts these perceptions from the teachers and the students. This reflects the purely academic orientation of the study which involves an objective enquiry into the state of things that relate to academic teaching in the Arab world.

6.4. Chapter summary

This chapter attempted to interpret the results and explain the use of cohesion in creating texture, and in the rhetorical structure. The chapter also accounts for teachers' and students' perceptions on the teaching and learning of academic writing and cohesion in Arab EFL context. The students use a variety of cohesive devices to create texture which is predominantly shaded by lexical repetition. A limited range of vocabulary is seen in students' text as is the restricted repertoire of semantic relations demonstrated by the repetitive use of a few conjunctives. This also limits the rhetorical functions only to a few as has been seen in the rhetorical structure of the students' texts. However, the use of referential cohesion despite the highest percentage of misuse was appropriate to academic discourse in terms of objectivity and formality. The Arab cultural influence has been more visible in the choice of lexical repetition as compared with other devices in the framework. As regards teachers and students perceptions, a high level of disagreement suggests that there is a need for awareness raising and training for academic writing in general and cohesion in particular for both the teachers and the students.

Chapter 7: Conclusion: limitations, implications, and recommendations

7.0. Limitations of the Study

The present study despite a detailed analysis of cohesion devices in the argumentative essays of Saudi undergraduate students of EFL carried out from multiple perspectives and frameworks is not without its limitations. Therefore, a number of factors limit the scope of the study:

First, the study was conducted in Saudi Arabia and the sample of texts for analysis was collected from one institution only i.e. English Language Center, Yanbu Colleges and Institutes. The study, therefore, does not include other Saudi institutes where academic writing is taught at the undergraduate level, and the wider Arab EFL context outside Saudi Arabia. And, as noticed by one of the teachers in his interview for this study, the academic context in Arab countries beyond the Gulf region such as Algeria , Morocco and Tunis is entirely different from the one in the Middle East. This implies that the findings of the current study may have limited generalizability across the Arab world. Secondly, the study analyzed samples of writing from male students due to segregation of male and female education in separate campuses. Hence, the study does not account for gender differences in writing, especially in the use of cohesion in text formation. Thirdly, the sample for analysis from Saudi students represents an iota of EFL representation globally which once again limit the scope for generalization of result findings to other EFL settings.

In addition, the research design for the current study is limited in sample size. 30 texts were collected for cohesion analysis of argumentative essays which may not reflect the totality of student writing in Saudi context. Similarly, the sample size of student participants (n = 60) in the structured questionnaire, teacher respondents for the questionnaire (n= 112), and teacher interviews (n= 30) may represent only a small portion of the probable population. Moreover, the study does not include other academic genre for analysis of cohesion such as the narrative or the expository which have distinct rhetorical organization and linguistic features. Hence, the results of the study of cohesion for argumentation may not be applied to that of narration or exposition. Importantly though, the study adopts Halliday and Hasan's (1976) scheme of cohesion analysis.

Other model of cohesion analysis such as the ones proposed by Hasan (1985), Hoey (1991), Martin (2001) have not been used which might have revealed different findings in regard to cohesion in the texts.

Likewise, the current study focused on studying cohesion in relation to the creation of texture in argumentative essays. In other words, the study analyzed cohesive devices on the basis of their incidence and frequency in the texts to observe and explain their behaviour in creating texture (research question 1), and the rhetorical structure (research question 2). Other aspects such as the relationship of cohesion in creating coherence or with writing quality assessed on an analytic scale both in the overall texts or the rhetorical structure have not been attempted. The researcher used Hyland's (1990) model for the analysis of cohesion in rhetorical structure; however, other frameworks for argumentative essays such as that of Toulmin (1958, 2003) have not been used which implies that results of cohesion analysis in the rhetorical structure may vary when received from other models.

The study is also limited in its treatment of cohesion as based only on product manifestations in students' texts. Causal factors that determine the choice of cohesive elements or the processes involved in the use of cohesive devices are outside the scope of this study as they involve an experimental or quasi-experimental study for such an analysis. It, however, can be a strong stimulant for future research.

7.1. Implications of the Study

The results of the present study indicate certain implications for successful pedagogical practices in Saudi context in particular and in other EFL contexts in general. First, the study suggests that there is need to expose students to the notion of cohesion as a text-forming device which most textbook content, course designs and pedagogic strategies seem to ignore. This approach will facilitate students to establish logically and semantically clear and meaningful relationships between different ideas in the text and enhance the communicative effect of their discourse. Secondly, as Schmitt (2000 p.113) proposes, explicit instruction in rhetorical organization and lexical cohesion allows students to "think about vocabulary not as discrete words, but as interrelated members of a cohesive discourse", there is need to integrate reading and listening

with writing with a twofold purpose: to expose students to model texts in order to develop familiarity with different types of genre, rhetorical patterns, and academic conventions; and develop their lexical base not only to minimize overuse of lexical repetition as evident in this study but also to enhance use of other types of reiteration, collocations, and conjunctives.

The study also implies that the analysis of cohesion as a text-forming resource, and of cohesion in the rhetorical structure does not provide a conclusive view of discourse competence in academic writing. This entails that other sources of texture, rhetorical organization, and cultural impact should receive due consideration in both course design and pedagogic initiatives.

7.2. Recommendations for further research

Following limitations of the present study, a few recommendations can be presented for further research:

As the study focused on analysis of cohesion in the creation of texture, future studies can include study of the intra-sentence structure and the macro structure of discourse to get a fuller account of texture in students' writing. Another viable proposition for research could be the study of relationship between texture and coherence or texture and writing quality assessed on an analytic scale to ascertain the role of cohesion and writing quality or coherence and writing quality or texture and writing quality. Similarly, a study that could investigate causal factors in relation to misuse and overuse as well as cognitive processes that dictate the choice of cohesive devices among students can yield some practically useful insights for effective teaching practices.

The use of cohesion in the rhetorical structure i.e. in the main stages and their relevant moves as done in the present study can be extended to other genres such as the narrative and the expository and an inter-genre analysis of cohesion on a similar pattern can help to identify genre-specific cohesive devices which can then be made the focus of teaching. Moreover, research into the relationship between the stages and moves in the rhetorical structure and cohesive devices in terms of quality and specificity is expected to be both insightful and practical for teaching purposes.

From the cultural point of view, there is the possibility of a study that can measure relationship of appropriateness between culturally motivated use of cohesive devices and the globally acknowledged features of academic writing. This will help course designers and teachers to focus on those cohesive items that contribute toward the creation of academically appropriate writing and enable students achieve membership of their respective discourse communities. In Arab context, especially the Saudi, the majority of the EFL teachers are from non-Arab background; a study to measure their familiarity with the Arabic language and culture, and the effects on writing will yield beneficial results for training of these teachers so that they properly assimilate contextual elements that affect success of the writing programmes.

The current study can be replicated in a Saudi context but with a larger sample size. For example, it can be extended up to the regional or even national level by creating clusters and cohorts among the institutions for collection of the sample texts, questionnaires, and teacher interviews. The results thus obtained will have a higher generalization potential than the present study, and can be used for improving the quality of course content and teaching of cohesive devices in academic writing.

Finally, as observed in teacher interviews, there is a need for external EFL support systems such as may come from the writing centers. A research can study the feasibility of such a proposal and identify support systems that the writing center should supply ranging, for instance, from individual student counseling to teacher mentoring; and from student awareness raising to writing competitions.

7.3. Conclusion

The study through text analysis and survey has attempted to study the role of cohesion as a text-forming property in the creation of argumentative essays written by Saudi undergraduate students of EFL. Perspectives mainly from SFL, CRT, Academic literacies, ESP/EAP, and ELT traditions helped in identifying gaps in previous and contemporary research, and thereby guided in generating three research questions to find out answer to the main question of the study. I used Halliday and Hasan's (1976) framework for cohesion analysis as well as Hyland's (1990) rhetorical structure. The elementary finding of this dissertation is that cohesion as explained by

Halliday and Hasan (1976), and as operationalized for analysis of the students' essays in the first two research questions is certainly a quantifiable measure of the study of texture as a text-forming resource in students' argumentative writing. Referential and Lexical cohesion have been observed as the statistically significant resources of cohesion in students' texts with instances of misuse that were mainly found in the use of referential cohesion and overuse that was predominantly visible in repetition of the same lexical item. The texture thus created by students' use of cohesive devices can be identified with Halliday and Hasan's (1976) notion of dense texture. Importantly, it was cohesive density and not the text length which significantly impacted students' Exam and cohesion scores. The study is also first of its kind to have done cohesion analysis in the rhetorical structure of argumentative essays. The analysis unveiled that students' use of cohesion devices corresponds with the length of the move in terms of words or sentences. Statistically significant associations between moves in each stage of the essays indicated the presence of coreferential element in the texts, and thereby the texture. I also used structured questionnaires and personal interviews to triangulate the study. The participants - teachers and students did agree on certain points but mostly their perceptions did not collate. Concerns about the use of cohesion, academic writing, pedagogy, language background etc. were raised by both respondents.

Following the results of the text analysis, the students displayed limited lexical range and rhetorical diversity which indicate that the majority are not proficient writers. The situation leads to certain implications in regard to course design, teaching, and future research especially in the Saudi EFL context.

However, cohesion as indicted earlier, provides only a partial explanation of texture in discourse - other contributions come from the intra-sentence structure and macro-structure of discourse. The current study and its cohesion analysis are expected to be understood and appreciated from this perspective. Despite its limitations, the study considers itself a humble contribution to the body of cohesion and academic writing research in Saudi context. It is expected that the findings will provide some useful insights to pedagogic practices in the research context where the study was conducted specifically, and to the broader EFL initiatives across Saudi Arabia and the Arab world generally.

8.0. References

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9.0. Appendices

Appendix 1: McWhorter (2005) typical organization patterns and functions in academic writing

Organization Pattern	Function	Signal Words
Definition	To explain the meaning of new words or phrases.	is, refers to, can be defined as, means, consists of, involves, is a term that, is called, is characterized by, occurs when, are those that, entails, corresponds to, is literally
Classification	To divide a topic into sections on the basis of common characteristics.	classified as, comprises, is composed of, several varieties of, different stages of, different groups that, includes, one, first, second, another, finally, last
Chronological Order	To describe occurrence of events in time order.	first, second, later, before, next, as soon as, after, then, finally, meanwhile, following, last, during, in, on, until
Process	To explain the sequence of how things are done or work.	first, second, next, then, following, after that, last, finally
Order of Importance	To describe ideas in order of priority or preference.	less, more, primary, next, last, most important, primarily, secondarily
Spatial Order	To describe physical location or position of people, objects, or places in space.	above, below, beside, next to, in front of, behind, inside, outside, opposite, within, nearby
Cause and Effect	To describe why a phenomenon happens and with what results.	Causes: because, because of, for, since, stems from, one cause is, one reason is, leads to, causes, creates, yields, produces, due to, breeds, for this reason Effects: consequently, results in, one result is, therefore, thus, as a result, hence
Comparison and Contrast	To show similarities and/or differences among ideas, theories, concepts, objects, or persons.	Similarities: both, also, similarly, like, likewise, too, as well as, resembles, correspondingly, in the same way, to compare, in comparison, share Differences: unlike, differs from, in contrast, on the other hand, instead, despite, nevertheless, however, in spite of, whereas, as opposed to
Listing/Enumeration	To organize lists of	the following, several, for example,

	information: characteristics, features, parts, or categories.	for instance, one, another, also, too, in other words, first, second, numerals (1, 2, 3...), letters (a, b, c...), most important, the largest, the least, finally
Statement and Clarification	To indicate that information explaining a concept or idea will follow.	in fact, in other words, clearly, evidently, obviously
Summary	To indicate that a condensed review of an idea or piece of writing is to follow.	in summary, in conclusion, in brief, to summarize, to sum up, in short, on the whole
Generalization and Example	To provide examples that clarify a broad, general statement.	for example, for instance, that is, to illustrate, thus
Addition	To indicate that additional information will follow.	furthermore, additionally, also, besides, further, in addition, moreover, again

Appendix 2: Approval from Research and Ethics Committee, De Montfort University



HLS FREC Ref: 1836

3rd October 2016

Zulfiqar Ahmed
PhD Candidate

Dear Zulfiqar,

Re: Ethics application – A study of the use of cohesion as a text-forming resource in the academic writing of Saudi undergraduate students of English as a Foreign Language. (Ref: 1836)

I am writing regarding your application for ethical approval for a research project titled to the above project. This project has been reviewed in accordance with the Operational Procedures for De Montfort University Faculty of Health and Life Sciences Research Ethics Committee. These procedures are available from the Faculty Research and Commercial Office upon your request.

I am pleased to inform you that ethical approval has been granted by Chair's Action for your application. This will be reported at the next Faculty Research Committee.

Should there be any amendments to the research methods or persons involved with this project you must notify the Chair of the Faculty Research Ethics Committee immediately in writing. Serious or adverse events related to the conduct of the study need to be reported immediately to your Supervisor and the Chair of this Committee.

The Faculty Research Ethics Committee should be notified by e-mail to hlsfro@dmu.ac.uk when your research project has been completed.

Yours sincerely,

A handwritten signature in black ink, appearing to read "J. Grootveld".

Professor Martin Grootveld
Chair
Faculty Research Ethics Committee
Faculty of Health & Life Sciences
De Montfort University

Email: hlsfro@dmu.ac.uk

Web: <http://www.dmu.ac.uk/research/ethics-and-governance/faculty-specific-procedures/health-and-life-sciences-ethics-procedures.aspx>

Appendix 3: ELCY approval for collection of data

Re: Access to Research Data

AA

Aziz Ahmad <amina@rcyci.edu.sa>

Reply

Wed 6/8/2016, 2:48 PM

You

DMU

Mr. Zulfiqar.pdf
483 KB

Download

Save to OneDrive - Personal

Dear Zulfiqar Ahmad

I received your request. I feel happy to inform you that English Language Center Yanbu has decided to extend the required help. I am sending the soft copy of the formal permission in the attachment and will dispatch the hard copy to your postal address soon. You can visit English Language Center t your convenient time to collect the required material.

Hoping for the best.

. Aziz Ahmad

Course Coordinator

ENG 301 & 302

English Language Center Yanbu

On Mon, Jun 6, 2016 at 12:52 AM, zulfiqar ahmed <zulfiqar16c@hotmail.com> wrote:

Dear Dr Aziz

As you know that I'm enrolled on a PhD Programme in Applied Linguistics at De Montfort University, UK. My area of research is the analysis of academic/argumentative writing of Saudi EFL undergraduate students.

Student argumentative essays written in real time examination are the main source of data along with teachers and students' perceptions through structured questionnaire. I also plan to interview academic writing teachers. The interviews will be recorded and later transcribed for data analysis. i'd request you to allow me access to the following source of data for my proposed study:

1. Collection of students' argumentative essays produced in Mid-Term or Final-Term examination.
2. Collection of students' responses from a structured questionnaire.
3. Collection of teachers' responses from a structured questionnaire.
4. Personal interview with teachers of academic writing

For obtaining Ethical Approval from my the Ethics Committee, De Montfort University, I need formal permission in a hard copy format from you as Course Coordinator stating that I'll be allowed to collect data mentioned above. I assure you that the data will be used only for academic/research purposes and in compliance with rules and regulations enunciated by De Montfort University. The identity of the participants will be kept anonymous and they will have the choice to opt out of the research without any prior notice.

Please do not hesitate to contact me should you need any further information.

Looking forward to hearing from you.

Zulfiqar Ahmad
IPhD Student
Faculty of Health & Life Sciences
De Montfort University
Leicester, UK
Mobile: +966509342968

Kingdom of Saudi Arabia
Royal Commission for Jubail and Yanbu
Royal Commission at Yanbu
Colleges & Institutes
English Language Center



المملكة العربية السعودية
الهيئة الملكية للجبيل وينبع
الهيئة الملكية بينبع
الكلية والمعاهد
مركز اللغة الإنجليزية

Zulfiqar Ahmad
PhD Student
Faculty of Health & Life Sciences
De Montfort University
Leicester, UK

Dated: 9/06/2016

RE: Access to Collection of Data for PhD Research

Dear Mr. Zulfiqar Ahmad,
Reference your email dated June 6, 2016 for access to data collection from our Undergraduate Academic Writing Programme at the English Language Center, Yanbu Colleges & Institutes, Yanbu Al Sinaiyah, KSA, I'm pleased to confirm that we can formally allow you to collect the following data:

1. Mid and Final Term Examination scripts
2. Student questionnaire
3. Teacher questionnaire
4. Writing teachers' interviews

Please let us know when you plan to visit us for data collection so that we could make suitable arrangements. It'd be convenient for us you update us a week before your planned visit. We'd also like you to let us know about the number of writing samples you want to collect, the number of students you want to complete the questionnaire, and the number of teachers you want to complete the questionnaire and attend the interview. You can reach me via email or phone number provided below for any further inquiry.

Looking forward to seeing you soon at the ELCY.

Kind regards

Dr Aziz Ahmad
Course Coordinator
Academic Writing (ENG 301 & 302)
ELCY, Yanbu Colleges & Institutes 30436
Directorate of Royal Commission at Yanbu
Yanbu Al Sinaiyah, 41912, KSA
Email: amina@rcyci.edu.sa
Mobile: +966500351197

DATE:	REF:	ATTACHMENTS:	المرفقات:	المرجع:	التاريخ:
LOCATION:	English Language Center - Yanbu			مركز اللغة الإنجليزية بينبع	مكان الإصدار:
REPLY TO:	P. O. Box 30436 Yanbu Al-Sinaiyah, Saudi Arabia			ص.ب: 30436 ينبع الصناعية - المملكة العربية السعودية	بمعنوان الرد إلى:
OFFICE TEL:	+966 (0) 4-3946169				
FAX:	+966 (0) 4-3946224				
E-MAIL:	amina@rcyci.edu.sa	PAGE No:			

Appendix 4: Participant information sheet & consent form

PARTICIPANT INFORMATION SHEET

Dear Friends & Colleagues

Greetings!

I hope you are fine and not much busy.

I'm a PhD candidate in Applied Linguistics at De Montfort University, UK. My area of research is "A study of the use of cohesion as a text-forming resource in the academic writing of Saudi undergraduate students of English as a Foreign Language".

One of the aims of my study is to seek perceptions via questionnaire from the teachers and students about the teaching and learning of academic writing and cohesive devices in Arab EFL context.

You have been chosen on the assumption that your experience in teaching academic writing and familiarity with the Arab EFL context will help collect reliable and valid data for analysis finally contributing to completion of PhD thesis. All the data and information collected from the questionnaire will be treated as "anonymous" and "strictly confidential" and will be password protected. You will be assigned a code instead of your original name.

The questionnaire is based on 50 structured items and won't take you more than 15-20 minutes to complete.

Participating in this research study is, however, entirely voluntary. You need to sign consent form if you decide to participate. You can even withdraw at any point should you feel like without any prior reason or notice.

If you are interested in participating in the study you can reach the researcher either electronically or via mobile number provided below:

Email: zulfiqar16c@hotmail.com

Skype: [zulfiqar16pk](https://www.skype.com/user/zulfiqar16pk)

Mobile: +966509342968

In case you have issues or problems with the questionnaire, you can first contact the researcher at the contacts provided above. If not satisfied with the researcher's response, you should then contact the Administrator for the Faculty Research Ethics Committee, Research & Commercial Office, Faculty of Health & Life Sciences, 1.25 Edith Murphy House, De Montfort University, The Gateway, Leicester, LE1 9BH or hlsfro@dmu.ac.uk

I appreciate and thank you for your time and help.

Best wishes

Zulfiqar Ahmad

Here is the link to the questionnaire:

CONSENT FORM FOR PARTICIPATION IN THE STUDY

Title of project: [A study of the use of cohesion as a text-forming resource in the academic writing of Saudi undergraduate students of English as a Foreign Language (EFL)]

Name of researcher: [Zulfiqar Ahmad]

Please initial all boxes

if you agree

I confirm that I have read and understood the information sheet [date and version number] for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason. ☐

3. I agree that non identifiable quotes may be published in articles or used in conference presentations. ☐

4. I agree to the interview being digitally audio recorded ☐

5. I understand that data collected during the study may be looked at by a supervisor from De Montfort University. I give permission for the supervisor to have access to my data. ☐

6. I agree to take part in this study ☐

Print name of participant

Date

Signature

Print name of person taking consent

Date

Signature

Consent form date of issue: [date]

Consent form version number: [version]

Appendix 5: Assessment rubrics for the assessment of the argumentative essay ENG 302

	3	2	1	0.5
Structure & Organization	<p>The introduction contains a clearly stated thesis statement.</p> <p>The body fully and clearly explains the thesis statement.</p> <p>The conclusion effectively ends with author's final thought.</p> <p>Effective and varied transitions are used throughout the essay.</p>	<p>The introduction contains Thesis statement.</p> <p>The body explains the thesis statement.</p> <p>The conclusion presents the last step or another logical ending.</p> <p>Transitions are used Throughout the essay</p>	<p>The introduction contains thesis statement but it may be unclear, imprecise, or undeveloped.</p> <p>The body explains only some of the sub ideas mentioned in the thesis statement.</p> <p>The conclusion does not present the last step or any other logical reflection on the process.</p> <p>More or better transitions are needed throughout The essay.</p>	<p>The introduction lacks Thesis statement.</p> <p>The body does not address the points mentioned thesis statement</p> <p>The conclusion is missing or repetitive.</p> <p>The writing lacks transitions.</p>
	7-8	5-6	3-4	2-1
Contents	<p>The overall thesis is clear.</p> <p>The arguments are presented in the effective, precise and clear way in which they are mentioned in the thesis statement.</p> <p>Transitional words and phrases that show forceful ideas are used effectively.</p>	<p>The overall thesis is generally clear.</p> <p>Most of the arguments are presented and explained in order of their sequence.</p> <p>Transitional words and phrases are used.</p> <p>Most word choices are precise.</p>	<p>The overall arguments are unclear.</p> <p>Ideas may be presented In a sketchy way.</p> <p>The writing lacks effective words and phrases to describe the arguments.</p> <p>Most word choices are</p>	<p>No Process is apparent in the writing.</p> <p>The writing does not address the intended process.</p> <p>Word choices are imprecise, redundant, or confusing</p> <p>Writing is sketchy</p>

	<p>Word choice is consistently precise.</p> <p>There is sense of completeness.</p>	Some details are missing.	<p>imprecise, redundant, or confusing.</p> <p>Many details are either confusing or missing.</p> <p>Transitional words and phrases are sparingly used.</p>	
	4	3	2	1
Grammar & Mechanics	There are few or no errors in mechanics, usage, grammar, or spelling.	There are some errors in mechanics, usage, grammar, or spelling	Errors in mechanics, usage, grammar, or spelling interfere with the audience's understanding of the process	Serious and numerous errors in mechanics, usage, grammar, or spelling block the audience's understanding of the process.

Appendix 6: Sample analysis for research question 1 & 2



Yanbu English Language Institute
ESP/EAP Programs – Semester 2016_1
ENG 302 – Academic Writing II
Final Examination – January 10, 2017
02:00 – 04:30 P.M (ACX Building – YIC Campus)

E-27

Name: Abdullah Darwish ID#: 3502653 Sec: 4

Important Notes:

- Write your name, ID#, and section number on the space provided above.
- Read and follow the instructions for each task fully and carefully.
- Use a black or blue pen ONLY. Writing with a pencil is not allowed.
- Refrain from using any form of dictionary, reference, or resource. Doing so will be considered cheating.

FINAL 2016_1

T-3
RQ1

TASK	TIME	SCORE	OUT OF	MARKER	CHECKER
				Name	Name
A	20 min.	5	05 pts	Dr. Amir	
				Signature	Signature
B	40 min.	4	10 pts		
				Date	Date
C	90 min.	9	15 pts	12/1/2017	
Total	150 min.	18	30 pts		

T-3

TASK C: ESSAY WRITING

(15 pts)

Grammar & Mechanics	Structure & Organization	Content
4	3	8
2	2	5

Choose ONE of the following topics and write a well-organized argumentative essay about it.

1. Do video games cause behavioral problems in youth?
2. Expat children should be allowed to study in YIC
3. Can money buy you happiness?

E - 27

|| Can money buy you happiness?

Money becomes important ^① factor to live today. As money is important factor ^③ happiness is also important in our daily life. Happiness is ~~the~~ feeling good or you can say feeling alive ~~while~~ some like feeling that you ~~own~~ the world while some people think that money can buy you happiness, to believe money can not buy you happiness, ~~the for some reasons~~. in fact, it is hard to live without money.

First opponents says that money can buy you desired goods. Many people believe that money can buy you what needed like a power ful car or the expensive smart phone. But, I think buying purchasing a car or smart phone but ~~it is not~~ the only way to happiness. ~~Because~~ for example, if you buy a new car but you do not hands ~~or less~~ to drive it. In addition, money can not buy you ~~every~~ ~~thing~~ thing you want like money can not buy you legs or eye to see the world if you do not have a

Second opponents say money can buy ~~the~~ ^{the} ~~best~~ ^{best} beauty wife.
Many people think if you have money you can get a ^{fantasy} ~~good~~ wife that is so ~~amazing~~ ^{amazing}. But it is kind that you ~~strong~~ ^{strong} woman wife that ~~loves~~ ^{loves} you because of your money? ~~not~~ ^{not} you. In addition, what your children see you that their mother ~~loves~~ ^{loves} ~~not~~ ^{not} loves you because of your money. Also, the society will ~~see~~ ^{see} ~~total~~ ^{total} ~~take~~ ^{take} ~~best~~ ^{best} ~~for~~ ^{for} ~~you~~ ^{you} as man ~~marry~~ ^{marry} because of his money and all of that ~~about~~ ^{about} will not make you feel happy. ~~a~~ ^a beauty wife.

Third opponents money can ~~gives~~ ^{gives} you ~~fantasy~~ ^{fantasy} friends, create fantasy relationships. Some people say the person who have ~~an~~ ^{an} ~~fantasy~~ ^{fantasy} friends that is great even if it depend on money. While, if it depend on the money so one day your money ~~gone~~ ^{gone} so they will ~~disappear~~ ^{disappear}. ~~disappear~~ ^{disappear} Also, friends that love ~~the~~ ^{the} to your money will not be in your side as the friends that love you because of your personality.

Finally, ~~unlike~~ ^{unlike} some people believe that ~~the~~ ^{the} money can buy you happiness. ~~I~~ ^I believe that money can not buy you happiness. ~~Money~~ ^{Money} can not buy you ~~every~~ ^{every} thing you want like eye a ~~the~~ ^{the} wife that ~~loves~~ ^{loves} you because of your money ~~and~~ ^{and} not of your personality will ~~surely~~ ^{surely} not gives ^{marry} ~~you~~ ^{you} the ~~the~~ ^{the} love you want. Friend that you ~~create~~ ^{create} with ~~money~~ ^{money} will not be in your side when you ~~do~~ ^{do} not have money. Money is important and ~~every~~ ^{every} one should ~~take~~ ^{take} care about it and collect it but ~~on~~ ^{on} ~~the~~ ^{the} it is not ~~every~~ ^{every} thing you want to be happy.

Text 3-S-Unit: Main Analysis

Colour coding for cohesive devices

Reference R	C	Substitution S	C	Ellipsis E	C	Conjunction C	C	Lexical cohesion L	L
Personal	R1	Nominal	S1	Nominal	E1	Additive	C1	Repetition	L1
Demonstrative	R2	Verbal	S2	Verbal	E2	Adversative	C2	Synonymy	L2
Comparative	R3	Clausal	S3	Clausal	E3	Causal	C3	Superordinate	L3
						Temporal	C4	General word	L4
								Collocation	L5
Errors; ambiguity; inappropriateness etc.						Code: Appropriate: A Inappropriate: IA			

Topic: Can money buy you happiness?

SU #	S-Units & Cohesive Item/s	No. of ties	Type	Presupposed	IA
1	Money becomes important Factor to live today.	0			
2	As the R2 money L1 is important factor L1 in our lifes, happiness is also important in our daily life.	3	R2, L1 (2)	Money (SU1); important factor (SU1);	R2
3	Happings L1 is feeling good or you can say feeling alive some like feeling that you own the world.	1	L1	Happiness (SU2)	
4	while some pepole think that mony L1 can buy you happines L1, I believe money L1 can not buy you happiness L1.	4	L1 (4)	Money (SU2); Happiness (SU3)	
5	in fact C2, it is hard to live without money L1.	2	C2; L1	Money (SU4)	
6	First C4 opponents say that money can buy you L1 desired goods.	2	C4, L1	Money can buy you (SU4)	
7	Many people believe that money can buy you L1 your needed like a power ful car or expensive smart phone. L3	2	L1; L3	Money can buy you (SU6); desired goods (SU6)	
8	But C2, I think purchasing L2 car or smart phone L1 not the only way L4 to happines L1	5	C2; L2; L4; L1 (2)	SU7; Buy (SU7); car or expensive smart phone (SU7); purchasing...; happiness (SU4);	
9	for example C1, if you buy a new car L1 but you do not hands to drive it R1.	3	C1; L1; R1	SU8; car (SU8); car	
10	In addition C1 money can not buy L1 you every thing you want like money can not buy you L1 eye L3 to	5	C1; L1 (2); L3; E1	SU8; money cannot buy you (SU4); thing; one/eye	

	see the world if you do not have E1 .				
11	Second, C4 opponents L1 say money can buy L1 beauty wife.	3	C4; L1 (2)	SU9; opponents (SU6); money can buy (SU7)	
12	Many people L1 think if you have money L1 you can get a famous wife L1 that is so amazing.	3	L1 (3)	Many people (SU7); wife (SU11)	
13	But C2 , it R1 is right that you wanna wife L1 that marry you because of C3 your money L1 ?	4	C2; R1 ; L1 (2); C3	SU11; (getting a wife because of money); wife (SU12); money (SU12)	R1
14	In addition C1 what your children see you that their R1 mother L3 loves you because of your money L1 .	4	C1; R1; L3; L1	SU12; children (2); wife (SU13); your money (SU13)	
15	Also, the society will see you as man marry L1 a beauty wife L1 because of his R1 money L1 and all of that R2 will not make you feel happy.	5	L1 (2); L1 ; R1 ; R2	Marry (SU13); Beauty wife (SU10); (getting a wife because of money);	L1 ; R1
16	third C4 opponents L1 money L1 can create famous relationships.	3	C4; L1 (2)	SU14; opponents (SU10); money (SU15)	
17	Some people say the person who have a famous friends L3 is great even if it R1 depend on money L1 .	2	R1; L1	Relationships (SU16); Ambiguous; money (SU16)	
18	while, if it R1 depend L1 on the R2 money L1 so C3 one day your money L1 gone so C3 they R1 will disappear.	8	R1; R2 ; L1 (3); C3 ; C3; R1	depend (SU16); money (SU17; friends (SU17)	R2 ; C3
19	Also, friends L1 that love due to your money L1 will not be in your side as the R2 friends L1 that love you because of C3 your personality.	5	L1 (3); R2; C3	Friends (SU17); money (SU18);	
20	Finally C4 , some people believe that money can buy you happiness L1 .	2	C4; L1	Summing up; some people ... (SU4)	
21	I believe that money can not buy you happiness L1 .	1	L1	I believe (SU4)	
22	Money L1 can not buy you every thing you want like eye L1 .	1	L1	Money (SU10)	
23	wife that marry you because of your money L1 not S3 of your personality will surely not give you the true love you want.	2	L1; S3	Wife that (SU13); marry you	
24	Friend L1 that you create with money L1 will not be on your side when you do not have money L1 .	3	L1 (3)	Friend (SU19); money (SU23)	
25	Money L1 is important and every one should care about it R1 and collect it R1 but C2 it R1 is not every thing you want to be happy.	5	L1; R1 (3); C2	Money; money is important.....	

	Reference R			Substitution S			Ellipsis E			Conjunction C				Lexical Cohesion L					
	R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5	
A	7	2				1	1			3	4	3	4	42	1	3	1		
IA	2	2										1		1					
Total A	9			1			1			14				47			72		
Total IA	4			0			0			1				1			5		
Total	78																		



Yanbu English Language Institute
ESP/EAP Programs – Semester 2016_1
ENG 302 – Academic Writing II
Final Examination – January 10, 2017
02:00 – 04:30 P.M (ACX Building – YIC Campus)

E-36

Name: Meshari Ali Awarth

ID#: 3501102

Sec: 31

Important Notes:

- Write your name, ID#, and section number on the space provided above.
- Read and follow the instructions for each task fully and carefully.
- Use a black or blue pen ONLY. Writing with a pencil is not allowed.
- Refrain from using any form of dictionary, reference, or resource. Doing so will be considered cheating.

T-16
RQ1&2

FINAL

2016_1

TASK	TIME	SCORE	OUT OF	MARKER	CHECKER
A	20 min.	5	05 pts	Name Dr. Awarth	Name
B	40 min.	8	10 pts	Signature In	Signature
C	90 min.	13	15 pts	Date 12/1/2017	Date
Total	150 min.	26	30 pts		

TASK C: ESSAY WRITING

(15 pts)

Grammar & Mechanics	Structure & Organization	Content
4	3	8
3	3	7

Choose ONE of the following topics and write a well-organized argumentative essay about it.

1. Do video games cause behavioral problems in youth?
 → release stress
 → Learning
 → Real world life images.
2. Expat children should be allowed to study in YIC
3. Can money buy you happiness?

E-36

T-16

11 Do video games cause behavioural problems in youth?

Video games are considered one of the best entertainment activities around the world. They have been created for more than 40 years and still getting more popular in these days. Some people say if video games cause a behavioral problem in youth, but I say they don't. I have been playing video games since a young age and still playing and they didn't affect me badly. ~~in fact~~ I learned a lot of things from video games. However, video games don't cause behavioral problems in youth and they have a lot of benefits such as releasing stress, learning and providing real life images.

Video games can help to release stress and pressure. Whether you are a student who ~~has~~ have stress of homework and exams, or you are an employee who have stress from your job, video games could be a relief. They are great for dealing with anger, at least you can release your anger on monsters in video games rather than releasing anger on someone.

Another benefit of video game that they are great method way for us to learn. They teach you a lot of thing. They are great for improving language. I have learned more than 50% of my English language from video games and still improving my language from video games. Also ~~there are a lot of~~ game such as puzzle and adventure games can improve the way of ~~the~~ thinking. Video game ~~are called mind~~ are considered to be the mind sport as they affect in improving the mind greatly. ~~Video game~~ Some video games are emotional and can teach the player how to express his ~~own~~ emotions.

One of the benefits of video games is ~~that~~ they provide or show real life images. For instance, war games give you instructions to attack ~~the~~ enemy forces or to defend your ~~base~~ base, or to protect someone etc. ~~That~~ That is one example of how video games can provide real life images. They ~~also can~~ also can make you ~~feel~~ responsible for doing ~~things~~ good or bad ~~the~~ thing, or how to deal with consequences. This is only one example of how games can show real life images.

Although video games ~~do~~ have a lot of benefits, some people say they can cause some behavior problem especially for youth. They say video games can make the player more violent ~~and~~ and aggressive. They say video games can make the player a bully. They also say gamers are no emotional and they can't show sympathy or respect to people. They also say ~~the~~ Video game isolate ~~the~~ the player from his family ~~and~~, friends and other people. They say a lot of thing about video games and gamers.

In the end, video games have a lot of benefits such as releasing stress and anger, learning new things and providing real life images. Infact the player can develop himself from videogames as video games sometime become emotional. ~~They also~~ The player also can learn some ~~the~~ cultures from video games. The behavior ~~of~~ a youth depends on parenting and how parent can raise their son and what ~~the~~ environment they provide to him, not only from video games.

Text 16-S-Unit: Main Analysis

Colour coding for cohesive devices

Reference R	C	Substitution S	C	Ellipsis E	C	Conjunction C	C	Lexical cohesion L	L
Personal	R1	Nominal	S1	Nominal	E1	Additive	C1	Repetition	L1
Demonstrative	R2	Verbal	S2	Verbal	E2	Adversative	C2	Synonymy	L2
Comparative	R3	Clausal	S3	Clausal	E3	Causal	C3	Superordinate	L3
						Temporal	C4	General word	L4
								Collocation	L5
Errors; ambiguity; inappropriateness etc.						Code: Appropriate: A Inappropriate: IA			

Topic: Do Video Games Cause Behavioral Problem in youth

SU #	S-Units & Cohesive item/s	No. of ties	Type	Presupposed item/s	IA
1	Video games are considered one of the best entertainment activities around the world.				
2	They R1 have been created for more than 40 years and øE2 still getting more R3 popular in these R2 days.	4	R1; R2; R3; E2	Video games (SU1); days;	
3	Some people say video games L1 cause behavioral problem in youth, but C2 I say they R1 don't S3.	4	R1; S3; C2; L1	Video games (SU1); video games; cause	
4	i have been playing video games L1 since a young age and still playing øE1 and they R1 didn't affect me badly	3	R1; L1; E1	Video games (SU3); Video games (2)	
5	I learned a lot of things from video games L1.	1	L1	Video games (SUSU4)	
6	However C2, Video games don't cause behavioral problems in youth L1 and they R1 have a lot of benefits such as releasing stress, learning and providing real life images.	3	R1; C2; L1	Video games cause ...(SU3); Video games	C2
7	Video games L1 can help to release stress L1 and pressure.	2	L1(2)	Video games (SU6); SU6	
8	Whether you are a student who have stress L1 of homework and exams or you are an employee who have stress L1 from your job, video games L1 could be a relief L5.	4	L1(3); L5	Stress (SU7); stress-relief (SU6)	
9	They R1 also great for dealing with anger, at least you can release L1 your anger L1 on monsters in video	5	R1; L1 (4)	Video games (SU8); release (SU7); release your anger	

	games L1 rather than releasing anger L1 on someone.				
10	Another R3 benefit of video game L1 that they R1 can teach you a lot of thing.	3	R1; R2; L1	... a lot of benefits (SU6); Video games (SU9);	
11	They R1 are great for improving language L3.	2	R1; L3	Video games (SU9); a lot of thing (SU10)	
12	I have learned more than 50% of my English language L3 from video games L1 and ø E2 still improving my language from video games L1.	4	E2; L1(2); L3	(I am); Language (SU11); Video games; SU11	
13	Also game such as puzzle and adventure games L3 can improve the way of thinking.	1	L3	Video games/games	
14	Video game L1 are considered to be the R2 mind sport L2 as they R1 affect in improving the R2 mind L1 greatly.	6	R1; R2; R2; L1(2); L2	Video games (3); mind	R2
15	Some video games L1 are emotional and can teach the R2 player how to express his R1 emotions.	3	R1; R2; L1	Video games (SU14);	R2
16	One of the benefits of video games L1 is they R1 provide or show real life images L1.	3	R1; L1(2)	... benefit of (SU10); Video games; providing real ... (SU6)	
17	For instance C1, war games L3 give you instruction to attack enemy forces or to defend your base, or to protect someone etc.	2	C1; L3	Video games	
18	That R2 is one example of how video games can provide real life images L1.	2	R2; L1	SU17; they provide (SU16)	
19	They R1 also can make you responsible for doing good or bad thing, or how to deal with consequences.	1	R1	Video games	
20	This R2 is only one example of how games can show real life images L1.	2	R2; L1	SU19; SU18	
21	Although video games have a lot of benefits L1, some people say they R1 can cause some behavior problem especially for youth L1.	3	R1; L1(2)	SU6; Video games; cause ... (SU3)	
22	They R1 say video games L1 can make the player L1 more R3 violent and aggressive L3.	5	R1; R2; L1(2); L3	Some people (SU21); Video games; behavior problem (SU21)	
23	They R1 say video games can make the player L1 a bully L2.	3	R1; L1; L2	Some people; Video games; the player (SU2); violent & aggressive (SU22)	
24	They R1 also say gamers L2 are no emotional and they R1 can't show sympathy or respect to people.	3	R1(2); L2	Some people; the player (SU23)	

25	They R1 also say video game L1 isolate the player L1 from his R1 family, friends, and other R3 people.	5	R1(2); R3; L1(2)	Some people; Video games; the player (SU23); (people known to the player)	
26	They R1 say a lot of thing about video games and games L1.	2	R1; L1	Some people;	
27	In the end C4, video games have a lot of benefits such as releasing stress and anger, learning new things and providing real life images L1	2	C4; L1	Summing up; SU6	
28	In fact C2 the player L1 can develop himself from video games L1 as video games sometime become emotional L1.	4	C2; L1(3)	The player (SU25); Video games; SU15	
29	The player L1 also can learn some cultures from video games L1.	2	L1(2)	The player (SU27); Video games	
30	The behavior youth depends on parenting and how parent L3 can raise their R1 son and what environment they R1 provide to him R1, not only from video games L1.	5	R1(3); L3; L1	Parenting; parents; son; Video games	

	Reference R			Substitution S			Ellipsis E			Conjunction C				Lexical Cohesion L					
	R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5	
A	22	4	4	0	0	1	1	2	0	1	2	0	1	38	3	6	0	1	
IA		2									1								
Total A	30			1			3			4				48					
Total IA	2									1									
Total CDs	89																		

Sample analysis for Research Question 2

Text 16-S-CDs-Argument-Structure: Main Analysis

Colour coding for cohesive devices

Reference R	C	Substitution S	C	Ellipsis E	C	Conjunction C	C	Lexical cohesion L	L
Personal	R1	Nominal	S1	Nominal	E1	Additive	C1	Repetition	L1
Demonstrative	R2	Verbal	S2	Verbal	E2	Adversative	C2	Synonymy	L2
Comparative	R3	Clausal	S3	Clausal	E3	Causal	C3	Superordinate	L3
						Temporal	C4	General word	L4
								Collocation	L5
Errors; ambiguity; inappropriateness etc.				Code: Appropriate: A				Inappropriate: IA	

Topic: Saudi youth are losing thier cultural identity

	Stage	Rhetorical structure (RS) (Moves)		Sentence-Units (SU) & Cohesive Item/s	No. of ties	Type A IA
1.	Introduction (15)	1	(Gambit)	Video games are considered one of the best entertainment activities around the world.		
		2	(Information)	They R1 have been created for more than 40 years and øE2 still getting more R3 popular in these R2 days.	4	R1; R2; R3; E2
		3	Proposition/Thesis Statement	Some people say video games L1 cause behavioral problem in youth, but C2 I say they R1 don't S3.	4	R1; S3; C2; L1
		4	(Evaluation)	i have been playing video games L1 since a young age and still playing øE1 and they R1 didn't affect me badly. I learned a lot of things from video games L1.	4	R1; L1(2); E1
		5	(Marker)	However C2, Video games don't cause behavioral problems in youth L1 and they R1 have a lot of	3	R1; C2; L1

				benefits such as releasing stress, learning and providing real life images.		
2.	Argument (61)	1	(Marker)			
		2	Restatement			
		3	Claim	<p>C1- Video games L1 can help to release stress L1 and pressure.</p> <p>C2- Another R3 benefit of video game L1 that they R1 can teach you a lot of thing.</p> <p>C3- One of the benefits of video games L1 is they R1 provide or show real life images L1.</p> <p>C4- Although video games have a lof of benefits L1, some people say they R1 can cause some behavior problem especially for youth L1.</p>	11	L1(7); R1(3); R2;
		4	Support	<p>S-C1- Wether you are a student who have stess L1 of homework and exams or you are an employee who have stress L1 from your job, video games L1 could be a relief L5. They R1 also great for dealing with anger, at least you can release L1 your anger L1 on monsters in video games L1 rather than releasing anger L1 on someone.</p> <p>S-C2- They R1 are great for improving language L3. I have learned more than 50% of my English language L3 from video games L1 and ø E2 still improving my language from video games L1. Also game such as puzzle and adventure games L3 can improve the way of thinking. Video game L1 are considered to be the R2 mind sport L2 as they R1 affect in improving the R2 mind L1 greatly. Some video games L1 are emotional and can teach the R2</p>	50	L1(20); L2 (3); L3 (5); L5; R1 (11); R2(7); R3; E2; C1

				<p>player how to express his R1 emotions.</p> <p>S-C3- For instance C1, war games L3 give you instruction to attack enemy forces or to defend your base, or to protect someone etc. That R2 is one example of how video games can provide real life images L1. They R1 also can make you responsible for doing good or bad thing, or how to deal with consequences. This R2 is only one example of how games can show real life images L1.</p> <p>S-C4- They R1 say video games L1 can make the player L1 more R3 violent and aggressive L3. They R1 say video games can make the player L1 a bully L2. They R1 also say gamers L2 are no emotional and they R1 can't show sympathy or respect to people. They R1 also say video game L1 isolate the player L1 from his R1 family, friends, and other R3 people. They R1 say a lot of thing about video games and games L1.</p>		
3.	Conclusion (13)	1	(Marker)	In the end C4	1	C4;
		2	Consolidation	video games have a lof of benefits such as releasing stress and anger, learning new things and providing real life images L1	1	L1
		3	(Affirmation)	In fact C2 the player L1 can develop himself from video games L1 as video games sometime become emotional L1. The player L1 also can learn some cultures from video games L1.	6	C2; L1(5)
		4	(Close)	The behavior youth depends on parenting and how parent L3 can rais thier R1 son and what environment they R1 provide to him R1, not only from video games L1.	5	R1(3); L3; L1

CDs in Rhetorical Structure: (Total: 89)

Introduction (Total: 15)																	
Gambit (Total: 0)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
Information (Total: 4)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
1	1	1					1										
Proposition (Total: 4)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
1					1					1			1				
Evaluation (Total: 4)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
1						1							2				
Marker (Total: 3)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
1										1			1				

Argument (Total: 55)																	
Marker (Total: 4)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
													4				
Restatement (Total:)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
Claim (Total: 11)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
3	1												7				
Support (Total: 50)																	

R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
11	7	1					1		1				20	3	5	0	1

Conclusion (Total: 13)																	
Marker (Total: 1)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
												1					
Consolidation (Total: 1)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
													1				
Affirmation (Total: 6)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
										1			5				
Close (Total: 5)																	
R1	R2	R3	S1	S2	S3	E1	E2	E3	C1	C2	C3	C4	L1	L2	L3	L4	L5
3													1		1		

Exam script sample for the Mid-term

EVALUATING RESEARCH TOPICS

(5 pts)

Read the topics in the table below and tick (✓) all the boxes that apply.

(1/4 x 10 = 2.5 pts)

Topics	Too narrow	Too Broad	Good	Expository	Persuasive
a. Yanbu Industrial College ^{what to discuss?}		✓	✓		
b. Why smartphones are detrimental to social relationships			✓		✓
c. Why you should stop using mobile while driving			✓		✓
d. The impact of technology on education in Saudi Arabia			✓	✓	
e. The driving age in your country	✓		✓		

2. Choose ONE of the good topics in the table above and write a thesis statement for it. (1 pts)

Although ~~at~~ a lot of people ^{which topic is this?} doing this bad habit of using their mobile while driving, they almost all agreed that it ~~is~~ ^{present} a serious hazard.

3. What is the difference between an expository essay and a persuasive one? (1.5 pt)

Expository essay is to explain / describe something.
Persuasive essay is to persuade / convince the readers ~~or think~~ about something.

TASK B: ESSAY WRITING

(20 pts)

Choose ONE of the following topics and write a well-organized essay about it.

- Saudi youth are losing their cultural identity. Do you agree?
- There is too much testing in Yanbu Industrial College. Do you agree?
- The Popularity of Fast Foods: Causes and Effects

Grammar & Mechanics	4	5
Structure & Organization	3	3
Content	8	12

II Too much testing in Yanbu Industrial College

There is a big difference between highschool and college in all counts, especially in tests. College students suffering from this fact. They were not properly prepared for such stress from high the highschool level of education. And that why they are facing a serious problems in college. Although almost all

educators support that college life must be challenging with this so many tests, there are many evidence show that it affect students grades and performance negatively. (15)

Opponents claim that this ~~hard to~~ college hard life with too many tests teach students responsibility and managing their time. However, this argument is invalid. Because the more tests they perform the more they will get tired of it in the middle of the semester and the more it'll affect their grades. Furthermore, let's not forget the fact that some students are married and maybe have a kid or two ~~with a lot of responsibilities~~ and they have to find a part job to take care of his own family, this alone will require them lots of responsibilities ~~be~~ other than college tests and responsibilities.

Opponents ~~on~~ also claim that ~~there~~ the number of tests ~~is~~ is just fine actually and it is all about the students wanting to be relaxed and playing around all the time. However, this argument is ~~is~~ inconclusive. Because the ~~ability of abilities~~ of the human being is different from person to another, maybe they ~~see it~~ ^{see} saw that it is a normal number of tests, but the students ~~see~~ see exactly the opposite and all students finally agreed on something. Beside, all opponents and educators are doctors or professors (people with high level of education) so it is not fair measuring it from their perspective. Furthermore, Always tests of the whole courses coming in ~~week~~ one week! All teachers scheduling their tests together in the same week, and all of them treat students like if they have his only course!

In Conclusion, there are many evidences that support decreasing number of tests in colleges because of how it will ^{positively} be reflected on students grades or at the very least get them well prepared from the highschool. //

Though you started well, your opinion is not very clear.

Appendix 7: Reliability analysis for the corpus & survey questionnaires

Case Processing Summary for the corpus

		N	%
Cases	Valid	30	100.0
	Excluded ^a	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics for the corpus

Cronbach's Alpha	N of Items
.799	3

Reliability results for teachers' survey

Factor	N of items	Cronbach's alpha
TL	13	.772
ALC	5	.660
LK	5	.745
TO	3	.835
COH	8	.844
RF	16	.943
Overall	50	.954

Reliability results for students' survey

Factor	N of items	Cronbach's alpha
TL	13	.847
ALC	5	.702
LK	5	.724
TO	3	.719
COH	8	.830
RF	16	.918
Overall	50	.943

Appendix 8: Scaled Exam & relative cohesion scores

Text #	Grammar & mechanics (out of 5)	Structure & organization (out of 3)	Content (out 12)	Total (out of 20)	CDS (50% of the content)
1	3.75	2	9	14.75	4.5
2	3.75	3	10.5	17.25	5.25
3	2.5	2	7.5	12	3.75
4	3.13	2.5	9	14.63	4.5
5	3.13	2	7.5	12.63	3.75
6	3.75	2	9	14.75	4.5
7	4	3	10	17	5
8	4	3	10	17	5
9	4	3	9	16	4.5
10	3	3	8	14	4
11	3	3	6	12	3
12	3	3	8	14	4
13	2.5	2	7.5	12	3.75
14	3.75	3	10.5	17.25	5.25
15	2.5	2	7.5	12	3.75
16	3.75	3	10.5	17.25	5.25
17	3.13	2.5	9.75	15.38	4.88
18	3.75	3	10.5	17.25	5.25
19	4	3	8	15	4
20	3	2	7	12	3.5
21	2	3	7	12	3.5
22	4	3	10	17	5
23	4	2	9	15	4.5
24	3	3	7	13	3.5
25	2.5	2	7.5	12	3.75
26	3.75	3	9	15.75	4.5
27	3.75	2	9	14.75	4.5
28	3.13	2.5	9	14.63	4.5
29	3.75	3	9	15.75	4.5
30	3.75	3	9	15.75	4.5

Appendix 9: Non-parametric correlation analysis for RQ 1
Correlation analysis of the corpus & the CD categories

Kendall's tau b		WPT	SUPT	Total R	Total S	Total E	Total C	Total L
WPT	CC	1.000	.386**	.521**	.068	.254	-.089	.453**
	Sig. (2-tailed)	.	.004	.000	.658	.085	.506	.001
	N	30	30	30	30	30	30	30
SUPT	CC	.386**	1.000	.212	.190	.063	-.074	.426**
	Sig. (2-tailed)	.004	.	.114	.223	.676	.588	.001
	N	30	30	30	30	30	30	30
Total R	CC	.521**	.212	1.000	.198	.327*	-.171	.306*
	Sig. (2-tailed)	.000	.114	.	.199	.028	.202	.020
	N	30	30	30	30	30	30	30
Total S	CC	.068	.190	.198	1.000	-.098	.062	.337*
	Sig. (2-tailed)	.658	.223	.199	.	.571	.690	.028
	N	30	30	30	30	30	30	30
Total E	CC	.254	.063	.327*	-.098	1.000	-.381*	-.067
	Sig. (2-tailed)	.085	.676	.028	.571	.	.011	.648
	N	30	30	30	30	30	30	30
Total C	CC	-.089	-.074	-.171	.062	-.381*	1.000	-.082
	Sig. (2-tailed)	.506	.588	.202	.690	.011	.	.541
	N	30	30	30	30	30	30	30
Total L	CC	.453**	.426**	.306*	.337*	-.067	-.082	1.000
	Sig. (2-tailed)	.001	.001	.020	.028	.648	.541	.
	N	30	30	30	30	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation of Reference (R) with Appropriate & Inappropriate R

Kendall's tau b		TR	AR	IAR
Total R	CC	1.000	.880**	.461**
	Sig. (2-tailed)	.	.000	.001
	N	30	30	30
AR	CC	.880**	1.000	.311*
	Sig. (2-tailed)	.000	.	.024
	N	30	30	30
IAR	CC	.461**	.311*	1.000
	Sig. (2-tailed)	.001	.024	.
	N	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis of Appropriate S & Appropriate Ellipsis

Kendall's tau b		Total S	Total E	AS	AE
Total S	CC	1.000	-.098	.921**	-.022
	Sig. (2-tailed)	.	.571	.000	.899
	N	30	30	30	30
Total E	CC	-.098	1.000	-.037	.957**
	Sig. (2-tailed)	.571	.	.829	.000
	N	30	30	30	30
AS	CC	.921**	-.037	1.000	-.065
	Sig. (2-tailed)	.000	.829	.	.709
	N	30	30	30	30
AE	CC	-.022	.957**	-.065	1.000
	Sig. (2-tailed)	.899	.000	.709	.
	N	30	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis of Appropriate & Inappropriate Conjunction

Kendall's tau b		Total C	AC	IAC
Total C	CC	1.000	.899**	.183
	Sig. (2-tailed)	.	.000	.228
	N	30	30	30
AC	CC	.899**	1.000	-.014
	Sig. (2-tailed)	.000	.	.926
	N	30	30	30
IAC	CC	.183	-.014	1.000
	Sig. (2-tailed)	.228	.926	.
	N	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis of Appropriate & Inappropriate Lexical cohesion

Kendall's tau b		Total L	AL	IAL
Total L	CC	1.000	.936**	.139
	Sig. (2-tailed)	.	.000	.350
	N	30	30	30
AL	CC	.936**	1.000	.036
	Sig. (2-tailed)	.000	.	.807
	N	30	30	30
IAL	CC	.139	.036	1.000
	Sig. (2-tailed)	.350	.807	.
	N	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis of CDPT & TR, TC, TL, OR, OC, & OL

Kendall's tau b		CDPT	TR	TC	TL	OUR	OUC	OUL
CDs per Text CC		1.000	.649**	.019	.625**	.400**	-.006	.448**
	Sig. (2-tailed)	.	.000	.886	.000	.004	.967	.001
	N	30	30	30	30	30	30	30
Total R	CC	.649**	1.000	-.171	.306*	.519**	-.129	.293*
	Sig. (2-tailed)	.000	.	.202	.020	.000	.380	.029
	N	30	30	30	30	30	30	30
Total C	CC	.019	-.171	1.000	-.082	-.178	.513*	-.123
	Sig. (2-tailed)	.886	.202	.	.541	.217	.001	.365
	N	30	30	30	30	30	30	30
Total L	CC	.625**	.306*	-.082	1.000	.218	-.039	.504**
	Sig. (2-tailed)	.000	.020	.541	.	.124	.791	.000
	N	30	30	30	30	30	30	30
OUR	CC	.400**	.519**	-.178	.218	1.000	-.101	.416**
	Sig. (2-tailed)	.004	.000	.217	.124	.	.526	.004
	N	30	30	30	30	30	30	30
OUC	CC	-.006	-.129	.513*	-.039	-.101	1.000	.095
	Sig. (2-tailed)	.967	.380	.001	.791	.526	.	.524
	N	30	30	30	30	30	30	30
OUL	CC	.448**	.293*	-.123	.504**	.416**	.095	1.000
	Sig. (2-tailed)	.001	.029	.365	.000	.004	.524	.
	N	30	30	30	30	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis of CDPT with total overused CDs

Kendall's tau b		Total OUCDs	CDPT
Total OUCDs CC		1.000	.422**
	Sig. (2-tailed)	.	.001
	N	30	30
CDPT	CC	.422**	1.000
	Sig. (2-tailed)	.001	.
	N	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation analysis of the Exam scores, CDS & the corpus

Kendall's tau b		WPT	SUPT	CDPT	Exam Scores	CDS
WPT	CC	1.000	.386**	.585**	.177	.217
	Sig. (2-tailed)	.	.004	.000	.188	.115
	N	30	30	30	30	30
SUPT	CC	.386**	1.000	.364**	.122	.199
	Sig. (2-tailed)	.004	.	.006	.374	.156
	N	30	30	30	30	30
CDPT	CC	.585**	.364**	1.000	.254	.313*
	Sig. (2-tailed)	.000	.006	.	.058	.023
	N	30	30	30	30	30
Exam Scores	CC	.177	.122	.254	1.000	.847**
	Sig. (2-tailed)	.188	.374	.058	.	.000
	N	30	30	30	30	30
CDS	CC	.217	.199	.313*	.847**	1.000
	Sig. (2-tailed)	.115	.156	.023	.000	.
	N	30	30	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis of the Exam scores, CDS & cohesion categories

Kendall's tau b		Exam Scores	CDS	TR	TS	TE	TC	TL
Exam Scores	CC	1.000	.847**	.318*	.171	.377*	-.205	.219
	Sig. (2-tailed)	.	.000	.019	.279	.013	.137	.104
	N	30	30	30	30	30	30	30
CDS	CC	.847**	1.000	.295*	.209	.304	-.177	.322*
	Sig. (2-tailed)	.000	.	.033	.197	.051	.210	.020
	N	30	30	30	30	30	30	30
TR	CC	.318*	.295*	1.000	.198	.327*	-.171	.306*
	Sig. (2-tailed)	.019	.033	.	.199	.028	.202	.020
	N	30	30	30	30	30	30	30
TS	CC	.171	.209	.198	1.000	-.098	.062	.337*
	Sig. (2-tailed)	.279	.197	.199	.	.571	.690	.028
	N	30	30	30	30	30	30	30
TE	CC	.377*	.304	.327*	-.098	1.000	-.381*	-.067
	Sig. (2-tailed)	.013	.051	.028	.571	.	.011	.648
	N	30	30	30	30	30	30	30
TC	CC	-.205	-.177	-.171	.062	-.381*	1.000	-.082
	Sig. (2-tailed)	.137	.210	.202	.690	.011	.	.541
	N	30	30	30	30	30	30	30
TL	CC	.219	.322*	.306*	.337*	-.067	-.082	1.000
	Sig. (2-tailed)	.104	.020	.020	.028	.648	.541	.
	N	30	30	30	30	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation analysis of the Exam scores, CDS, A, IA, & Overused CDs

Kendall's tau b		Exam scores	CDS	Total ACDs	Total IACDs	Total OUCDs
Exam scores	CC	1.000	.847**	.294*	-.038	.078
	Sig. (2-tailed)	.	.000	.029	.785	.563
	N	30	30	30	30	30
CDS	CC	.847**	1.000	.364**	-.105	.234
	Sig. (2-tailed)	.000	.	.008	.460	.091
	N	30	30	30	30	30
Total App CDs	CC	.294*	.364**	1.000	.194	.458**
	Sig. (2-tailed)	.029	.008	.	.149	.000
	N	30	30	30	30	30
Total InApp CDs	CC	-.038	-.105	.194	1.000	-.034
	Sig. (2-tailed)	.785	.460	.149	.	.800
	N	30	30	30	30	30
Total Overused CDs	CC	.078	.234	.458**	-.034	1.000
	Sig. (2-tailed)	.563	.091	.000	.800	.
	N	30	30	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlations of the Exam scores & CDS with A, IA, & OU CD categories

Kendall's tau b	Exam Scores	CDS	AR	AS	AE	AC	AL	IAR	IAC	IAL	OUR	OUC	OUL
Exam CC	1.000	.847**	.344*	.109	.427**	-.163	.190	.036	-.100	-.055	.189	-.056	.055
Scores Sig. (2-tailed)		.000	.011	.491	.005	.238	.159	.798	.514	.720	.194	.711	.689
N	30	30	30	30	30	30	30	30	30	30	30	30	30
CDS CC	.847**	1.000	.348*	.146	.357*	-.107	.296*	-.016	-.179	-.114	.256	.013	.195
Sig. (2-tailed)	.000		.012	.368	.022	.450	.032	.911	.256	.467	.087	.933	.166
N	30	30	30	30	30	30	30	30	30	30	30	30	30
AR CC	.344*	.348*	1.000	.121	.407**	-.195	.265*	.311*	-.104	.094	.596**	-.112	.326*
Sig. (2-tailed)	.011	.012		.434	.006	.149	.045	.024	.487	.533	.000	.449	.015
N	30	30	30	30	30	30	30	30	30	30	30	30	30
AS CC	.109	.146	.121	1.000	-.065	.065	.273	.119	-.308	-.164	.083	.019	.100
Sig. (2-tailed)	.491	.368	.434		.709	.677	.075	.458	.079	.349	.619	.912	.523
N	30	30	30	30	30	30	30	30	30	30	30	30	30
AE CC	.427**	.357*	.407**	-.065	1.000	-.354*	-.049	.040	.119	.025	.293	-.371*	-.015
Sig. (2-tailed)	.005	.022	.006	.709		.019	.739	.796	.479	.884	.067	.026	.921
N	30	30	30	30	30	30	30	30	30	30	30	30	30
AC CC	-.163	-.107	-.195	.065	-.354*	1.000	-.022	.209	-.014	.122	-.154	.437**	-.121
Sig. (2-tailed)	.238	.450	.149	.677	.019		.871	.135	.926	.421	.288	.004	.375
N	30	30	30	30	30	30	30	30	30	30	30	30	30
AL CC	.190	.296*	.265*	.273	-.049	-.022	1.000	.117	-.282	.036	.226	-.081	.506**
Sig. (2-tailed)	.159	.032	.045	.075	.739	.871		.394	.058	.807	.111	.582	.000
N	30	30	30	30	30	30	30	30	30	30	30	30	30
IAR CC	.036	-.016	.311*	.119	.040	.209	.117	1.000	-.073	.217	.095	-.041	-.025
Sig. (2-tailed)	.798	.911	.024	.458	.796	.135	.394		.640	.163	.520	.788	.855
N	30	30	30	30	30	30	30	30	30	30	30	30	30
IAC CC	-.100	-.179	-.104	-.308	.119	-.014	-.282	-.073	1.000	.428*	-.036	.132	-.071
Sig. (2-tailed)	.514	.256	.487	.079	.479	.926	.058	.640		.012	.824	.431	.642
N	30	30	30	30	30	30	30	30	30	30	30	30	30
IAL CC	-.055	-.114	.094	-.164	.025	.122	.036	.217	.428*	1.000	-.269	.212	.133
Sig. (2-tailed)	.720	.467	.533	.349	.884	.421	.807	.163	.012		.095	.206	.383
N	30	30	30	30	30	30	30	30	30	30	30	30	30
OUR CC	.189	.256	.596**	.083	.293	-.154	.226	.095	-.036	-.269	1.000	-.101	.416**
Sig. (2-tailed)	.194	.087	.000	.619	.067	.288	.111	.520	.824	.095		.526	.004
N	30	30	30	30	30	30	30	30	30	30	30	30	30
OUC CC	-.056	.013	-.112	.019	-.371*	.437**	-.081	-.041	.132	.212	-.101	1.000	.095
Sig. (2-tailed)	.711	.933	.449	.912	.026	.004	.582	.788	.431	.206	.526		.524
N	30	30	30	30	30	30	30	30	30	30	30	30	30
OUL CC	.055	.195	.326*	.100	-.015	-.121	.506**	-.025	-.071	.133	.416**	.095	1.000
Sig. (2-tailed)	.689	.166	.015	.523	.921	.375	.000	.855	.642	.383	.004	.524	
N	30	30	30	30	30	30	30	30	30	30	30	30	30

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Appendix 10: Non-parametric variance analysis for RQ1

Text length groups for the corpus

Group 1	G1	Text Length 250 to 299 - Text Length 300 to 349
Group 2	G2	Text Length 250 to 299 - Text Length 350 to 399
Group 3	G3	Text Length 250 to 299 - Text Length 400 to 449
Group 4	G4	Text Length 250 to 299 - Text Length 450 & above
Group 5	G5	Text Length 300 to 349 - Text Length 350 to 399
Group 6	G6	Text Length 300 to 349 - Text Length 400 to 449
Group 7	G7	Text Length 300 to 349 - Text Length 450 & above
Group 8	G8	Text Length 350 to 399 - Text Length 400 to 449
Group 9	G9	Text Length 350 to 399 - Text Length 450 & above
Group 10	G10	Text Length 400 to 449 - Text Length 450 & above

Kruskal Wallis results for the corpus, Exam scores & CDS in relation to text length

	Group	N	M	SD	Mdn	Mean Rank	Chi square	df	Asym p. Sig.	r
SUPT	Text length 250 to 299	8	20.93	3.999	21.00	10.25	8.440	4	.077	
	Text length 300 to 349	4				12.75				
	Text length 350 to 399	5				14.50				
	Text length 400 to 449	5				15.90				
	Text length 450 and above	8				22.50				
	Total	30								
CDPT	Text length 250 to 299	8	65.13	17.202	64.50	6.75	16.204	4	.003	0.558
	Text length 300 to 349	4				12.00				
	Text length 350 to 399	5				14.80				
	Text length 400 to 449	5				22.70				
	Text length 450 and above	8				21.94				
	Total	30								
Exam Scores	Text length 250 to 299		14.65	1.917	14.75	12.75	3.414	4	.491	
	Text length 300 to 349					18.38				
	Text length 350 to 399					11.60				
	Text length 400 to 449					16.20				
	Text length 450 and above					18.75				
	Total	30								
CDS	Text length 250 to 299	8	4.33	.620	4.50	11.63	4.471	4	.346	
	Text length 300 to 349	4				18.63				
	Text length 350 to 399	5				11.90				
	Text length 400 to 449	5				17.60				
	Text length 450 and above	8				18.75				
	Total	30								

Mann-Whitney U results for SUPT in relation to text length groups

	Group									
SUPT	1	2	3	4	5	6	7	8.	9	10
N	8 ; 4	8; 5	8; 5	8; 8	4; 5	4; 5	4; 8	5; 5	5; 8	5; 8
Mean rank	6.13; 7.25	6.19; 8.30	6.00; 8.60	5.44; 11.56	4.50; 5.40	4.75; 5.20	3.75; 7.88	5.30; 5.70	4.50; 8.56	5.40; 8.00
Sum of ranks	49.00; 29.00	49.50; 41.50	48.00; 43.00	43.50; 92.50	18.00; 27;00	19.00; 26.00	15.00; 63.00	26.50; 28.50	22.50; 68.50	27.00; 64.00
MWU	13.000	13.500	12.000	7.500	8.000	9.000	5.000	11.500	7.500	12.00 0
W	49.000	49.500	48.000	43.500	18.00 0	19.00 0	15.000	26.500	22.50 0	27.00 0
Z	-.516	-.965	-1.184	-2.592	-.496	-.245	-1.872	-.210	-1.845	-1.181
Asymp. Sig	.606	.335	.236	.010	.620	.806	.061	.834	.065	.238
Exact Sig. [2*(1-tailed Sig.)]	.683 ^b	.354 ^b	.284 ^b	.007 ^b	.730 ^b	.905 ^b	.073 ^b	.841 ^b	.065 ^b	.284 ^b
Exact Sig. (2-tailed)	.630	.366	.277	.008	.659	.905	.065	.897	.069	.263
Exact Sig. (1-tailed)	.323	.184	.140	.004	.325	.452	.034	.448	.036	.130
Point Probability	.022	.023	.033	.001	.040	.087	.008	.048	.009	.019
Effect size (r)				-0.648						

Mann-Whitney U for the CDPT in relation to text length groups

	Group									
CDPT	1	2	3	4	5	6	7	8.	9	10
N	8 ; 4	8; 5	8; 5	8; 8	4; 5	4; 5	4; 8	5; 5	5; 8	5; 8
Mean rank	5.38; 8.75	5.88; 8.80	4.50; 11.00	4.50; 12.50	4.50; 5.40	2.75; 6.80	3.50; 8.00	4.30; 6.70	5.30; 8.06	7.20; 6.88
Sum of ranks	43.00; 35.00	47.00; 44.00	36.00; 55.00	36.00; 100.00	18.00; 27.00	11.00; 4.00	14.00; 64.00	21.50; 33.50	26.50; 64.50	36.00; 55.00
MWU	7.000	11.000	.000	.000	8.000	1.000	4.000	6.500	11.50 0	19.00 0
W	43.000	47.000	36.000	36.000	18.00 0	11.000	14.00 0	21.500	26.50 0	55.00 0
Z	-1.534	-1.321	-2.936	-3.366	-.490	-2.205	-2.038	-1.257	-1.246	-.146
Asymp. Sig	.125	.186	.003	.001	.624	.027	.042	.209	.213	.884
Exact Sig.	.154 ^b	.222 ^b	.002 ^b	.000 ^b	.730 ^b	.032 ^b	.048 ^b	.222 ^b	.222 ^b	.943 ^b

[2*(1-tailed Sig.)]										
Exact Sig. (2-tailed)	.139	.207	.002	.000	.730	.032	.048	.238	.237	.943
Exact Sig. (1-tailed)	.069	.103	.001	.000	.365	.016	.024	.119	.120	.472
Point Probability	.008	.011	.001	.000	.087	.008	.010	.016	.017	.055
Effect size (r)			-0.814	-0.841		-0.735	-0.588			

Mann-Whitney U results for the CDS in relation to text length groups

	Group									
CDS	1	2	3	4	5	6	7	8.	9	10
N	8 ; 4	8; 5	8; 5	8; 8	4; 5	4; 5	4; 8	5; 5	5; 8	5; 8
Mean rank	5.50; 8.50	6.94; 7.10	5.81; 8.90	6.89; 10.13	6.13; 4.10	5.00; 5.00	6.63; 6.44	4.40; 6.60	5.70; 7.81	7.30; 6.81
Sum of ranks	44.00; 34.00	55.50; 35.50	46.50; 44.50	55.00; 81.00	24.50; 20.50	20.00; 25.00	26.50; 51.50	22.00; 33.00	28.50; 62.50	36.50; 54.50
MWU	8.000	19.500	10.500	19.000	5.500	10.000	15.50 0	7.000	13.50 0	18.50 0
W	44.000	55.500	46.500	55.000	20.50 0	25.000	51.50 0	22.000	28.50 0	54.50 0
Z	-1.373	-.074	-1.404	-1.375	-1.112	-.000	-.086	-1.170	-.963	-.226
Asymp. Sig	.170	.941	.160	.169	.266	.1000	.931	.242	.335	.821
Exact Sig. [2*(1-tailed Sig.)]	.214 ^b	.943 ^b	.171 ^b	.195 ^b	.286 ^b	.1000 ^b	.933 ^b	.310 ^b	.354 ^b	.833 ^b
Exact Sig. (2-tailed)	.194	.975	.176	.190	.341	.1000	.968	.333	.394	.887
Exact Sig. (1-tailed)	.101	.490	.090	.095	.175	.548	.487	.167	.195	.455
Point Probability	.028	.037	.006	.016	.063	.095	.048	.071	.045	.081
Effect size (r)										

Kruskal Wallis results for CD Categories in relation to text length groups

	Group	N	M	SD	Mdn	Mean Rank	Chi square	df	Asym p. Sig.	r
R	Text length 250 to 299	8	23.73	10.130	23.00	7.75	13.452	4	.009	0.463
	Text length 300 to 349	4				13.25				
	Text length 350 to 399	5				13.90				
	Text length 400 to 449	5				19.20				
	Text length 450 and above	8				23.06				
	Total	30								
S	Text length 250 to 299	8	.33	.661	.00	15.13	2.527	4	.640	
	Text length 300 to 349	4				11.50				
	Text length 350 to 399	5				17.30				
	Text length 400 to 449	5				18.10				
	Text length 450 and above	8				15.13				
	Total	30								
E	Text length 250 to 299	8	.67	.844	.00	13.25	7.592	4	.108	
	Text length 300 to 349	4				16.38				
	Text length 350 to 399	5				8.50				
	Text length 400 to 449	5				18.50				
	Text length 450 and above	8				19.81				
	Total	30								
C	Text length 250 to 299	8	8.23	3.928	8.00	13.94	8.833	4	.065	
	Text length 300 to 349	4				23.38				
	Text length 350 to 399	5				20.90				
	Text length 400 to 449	5				15.50				
	Text length 450 and above	8				9.75				
	Total	30								
L	Text length 250 to 299	8	32.17	10.048	32.50	9.31	12.549	4	.014	0.432
	Text length 300 to 349	4				8.50				
	Text length 350 to 399	5				15.40				
	Text length 400 to 449	5				21.40				
	Text length 450 and above	8				21.56				
	Total	30								

Mann-Whitney U for Reference in relation to text length groups

	Group									
CDS	1	2	3	4	5	6	7	8.	9	10
N	8 ; 4	8; 5	8; 5	8; 8	4; 5	4; 5	4; 8	5; 5	5; 8	5; 8
Mean rank	5.75; 8.00	6.19; 8.30	4.75; 2.60	4.56; 12.44	4.88; 5.10	4.13; 5.70	3.75; 7.88	4.60; 6.40	4.90; 8.31	5.50; 7.94
Sum of ranks	46.00; 32.00	49.50; 41.50	38.00; 53.00	36.50; 99.50	19.50; 25.50	16.50; 28.50	15.00; 63.00	23.00; 32.00	24.50; 66.50	27.50; 63.50
MWU	10.000	13.500	2.000	.500	9.500	6.500	5.000	8.000	9.500	12.500
W	46.000	49.500	38.000	36.500	19.500	16.500	15.000	23.000	24.500	27.500
Z	-1.023	-.959	-2.646	-3.318	-.123	-.865	-1.872	-.943	-1.541	-1.102
Asymp. Sig	.306	.337	.008	.001	.902	.387	.061	.346	.123	.270
Exact Sig. [2*(1-tailed Sig.)]	.368 ^b	.354 ^b	.006 ^b	.000 ^b	.905 ^b	.413 ^b	.073 ^b	.421 ^b	.127 ^b	.284 ^b
Exact Sig. (2-tailed)	.339	.361	.005	.000	.960	.468	.067	.381	.135	.295
Exact Sig. (1-tailed)	.172	.176	.003	.000	.476	.222	.034	.190	.069	.147
Point Probability	.022	.008	.002	.000	.048	.048	.008	.020	.011	.014
Effect size (r)			-0.733	-0.829						

Mann-Whitney U for Conjunction in relation to text length groups

	Group									
CDS	1	2	3	4	5	6	7	8.	9	10
N	8 ; 4	8; 5	8; 5	8; 8	4; 5	4; 5	4; 8	5; 5	5; 8	5; 8
Mean rank	5.13; 9.25	5.60; 9.10	6.81; 7.30	9.81; 7.19	5.88; 4.30	5.75; 4.40	10.00; 4.75	6.40; 4.60	10.10; 5.06	8.20; 6.25
Sum of ranks	41.00; 37.00	45.50; 45.50	54.50; 36.50	78.50; 57.50	23.50; 21.50	23.00; 22.00	40.00; 38.00	32.00; 23.00	50.50; 40.50	41.00; 50.00
MWU	5.000	9.500	18.500	21.500	6.500	7.000	2.000	8.000	4.500	14.000
W	41.000	45.500	54.500	57.500	21.500	22.000	38.000	23.000	40.500	50.000
Z	-1.885	-1.550	-.223	-1.117	-.868	-.751	-2.390	-.955	-2.291	-.886
Asymp. Sig	.059	.121	.824	.264	.385	.453	.017	.340	.022	.376
Exact Sig. [2*(1-tailed Sig.)]	.073 ^b	.127 ^b	.833 ^b	.279 ^b	.413 ^b	.556 ^b	.016 ^b	.421 ^b	.019 ^b	.435 ^b
Exact Sig. (2-tailed)	.067	.131	.861	.293	.413	.516	.014	.365	.023	.410
Exact Sig. (1-tailed)	.036	.067	.430	.147	.206	.254	.006	.183	.012	.204
Point Probability	.014	.011	.028	.017	.032	.040	.002	.020	.006	.019
Effect size (r)							-0.689		-0.635	

Mann-Whitney U for Lexical Cohesion in relation to text length groups

	Group									
CDS	1	2	3	4	5	6	7	8.	9	10
N	8 ; 4	8; 5	8; 5	8; 8	4; 5	4; 5	4; 8	5; 5	5; 8	5; 8
Mean rank	7.13; 5.25	5.75; 9.00	4.75; 10.60	5.19; 11.81	3.50; 6.20	3.50; 6.20	3.75; 7.88	4.20; 6.80	5.00; 8.25	6.80; 7.13
Sum of ranks	57.00; 21.00	46.00; 45.00	38.00; 53.00	41.50; 94.50	14.00; 31.00	14.00; 31.00	15.00; 63.00	21.00; 34.00	25.00; 66.00	34.00; 57.00
MWU	11.000	10.000	2.000	5.500	4.000	4.000	5.000	6.000	10.00 0	19.00 0
W	21.000	46.000	38.000	41.500	14.00 0	14.000	15.00 0	21.000	25.00 0	34.00 0
Z	-.852	-1.468	-2.639	-2.787	-1.470	-1.476	-1.872	-1.362	-1.466	-.147
Asymp. Sig	.394	.142	.008	.005	.142	.140	.061	.173	.143	.883
Exact Sig. [2*(1-tailed Sig.)]	.461 ^b	.171 ^b	.006 ^b	.003 ^b	.190 ^b	.190 ^b	.073 ^b	.222 ^b	.171 ^b	.943 ^b
Exact Sig. (2-tailed)	.436	.159	.006	.003	.190	.167	.065	.198	.158	.918
Exact Sig. (1-tailed)	.218	.080	.003	.002	.095	.079	.032	.099	.079	.460
Point Probability	.024	.012	.002	.000	.040	.016	.004	.016	.012	.030
Effect size (r)			-0.732	-0.696						

Kruskal Wallis results for overused CDs

OUCDs	Group	N	M	SD	Mdn	Mean Rank	Chi square	df	Asymp. Sig.	r
	Reference	30	13.17	10.336	12.50	39.68	26.147	2	.000	0.293
	Conjunction	30				32.75				
	Lexical Cohesion	30				64.07				

Mann-Whitney U for overused CDs

Group			
Overused CDs	1 OUR & OUC	2 OUR & OUL	3 OUC & OUL
N	30; 30	30; 30	30; 30
Mean rank	33.20; 27.80	20.45; 40.55	21.98; 39.02
Sum of ranks	996.00; 834.00	613.50; 1216.50	659.50; 1170.50
MWU	369.000	148.500	194.500
W	834.000	613.500	659.500
Z	-1.317	-4.632	-3.878
Asymp. Sig	.188	.000	.000
Exact Sig. (2-tailed)	.190	.000	.000
Exact Sig. (1-tailed)	.095	.000	.000
Point Probability	.002	.000	.000
Effect size		-0.598	-0.500

Kruskal Wallis results for A, IA, & OU CDs

	Group	N	M	SD	Mdn	Mean Rank	Chi square	df	Asym p. Sig.	r
1	AR	30	19.90	8.093	18.50	242.43	208.898	8	.000	0.776
2	AC	30	7.63	36.90	7.50	237.87				
3	AL	30	31.40	9.633	32.00	182.82				
4	IAR	30	3.83	2.422	4.50	125.38				
5	IAC	30	.60	1.248	.00	62.93				
6	IAL	30	.77	1.813	.00	65.48				
7	OUR	30	2.13	3.213	.50	87.52				
8	OUC	30	.70	1.055	.00	70.47				
9	OUL	30	10.33	8.206	10	144.60				

Mann-Whitney U for A, IA & overused CDs

	N	Mean Rank	Sum of Ranks	MWU	W	Z	Asym p. Sig	Exact Sig. (2-tailed)	Exact Sig. (1-tailed)	Point Probability	Effect size r
AR - AC	30 30	32.67; 28.33	980.00; 850.00	385.000	850.00 0	-.961	.336	.341	.170	.002	
AR - AL	30 30	45.27; 15.73	1358.00; 472.00	7.000	472.00 0	- 6.551	.000	.000	.000	.000	-0.845
AR - IAR	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.664	.000	.000	.000	.000	-0.860
AR - IAC	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.824	.000	.000	.000	.000	-0.881
AR - IAL	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.803	.000	.000	.000	.000	-0.878
AR - OUR	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.708	.000	.000	.000	.000	-0.866
AR - OUC	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.749	.000	.000	.000	.000	-0.871
AR - OUL	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.660	.000	.000	.000	.000	-0.859
AC - AL	30 30	45.03; 15.97	1351.00 479.00	14.000	479.00 0	- 6.447	.000	.000	.000	.000	-0.832
AC - IAR	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.664	.000	.000	.000	.000	-0.860
AC - IAC	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.824	.000	.000	.000	.000	-0.881
AC - IAL	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.803	.000	.000	.000	.000	-0.878
AC - OUR	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.708	.000	.000	.000	.000	-0.866
AC - OUC	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.749	.000	.000	.000	.000	-0.871
AC - OUL	30 30	45.50 15.50	1365.00 465.00	.000	465.00 0	- 6.660	.000	.000	.000	.000	-0.861
AL - IAR	30 30	43.60; 17.40	1308.00; 522.00	57.000	522.00 0	- 5.824	.000	.000	.000	.000	-0.751
AL - IAC	30 30	45.17; 15.83	1355.00; 475.00	10.000	475.00 0	- 6.674	.000	.000	.000	.000	-0.861
AL - IAL	30 30	45.03; 15.97	1351.00; 479.00	14.000	479.00 0	- 6.593	.000	.000	.000	.000	-0.851
AL - OUR	30 30	44.00; 17.00	1320.00; 510.00	45.000	510.00 0	- 6.040	.000	.000	.000	.000	-0.779
AL - OUC	30 30	45.07; 15.93	1352.00; 478.00	13.000	478.00 0	- 6.557	.000	.000	.000	.000	-0.846
AL - OUL	30 30	36.75; 24.25	1102.50; 727.50	262.500	727.50 0	- 2.777	.005	.005	.002	.000	-0.358

IAR-IAC	30 30	41.83; 19.17	1255.00; 575.00	110.000	575.00 0	- 5.237	.000	.000	.000	.000	-0.676
IAR-IAL	30 30	41.07; 19.93	1231.00; 598.00	133.000	598.00 0	- 4.866	.000	.000	.000	.000	-0.628
IAR-OUR	30 30	36.92; 24.08	1107.50; 722.50	257.500	722.50 0	- 2.900	.004	.003	.002	.000	-0.374
IAR- - OUC	30 30	41.40; 19.60	1242.00; 588.00	123.000	588.00 0	- 4.969	.000	.000	.000	.000	-0.641
IAR-OUL	30 30	24.27; 36.73	728.00; 1102.00	263.000	728.00 0	- 2.778	.005	.005	.002	.000	-0.358
IAC-IAL	30 30	30.12; 30.88	903.50; 926.50	438.500	903.50 0	-.214	.830	.846	.423	.005	
IAC-OUR	30 30	26.43; 34.57	793.00; 1037.00	328.000	793.00 0	- 2.066	.039	.039	.019	.001	-0.266
IAC-OUC	30 30	28.78; 32.22	863.50; 966.50	398.500	863.50 0	-.911	.362	.376	.188	.008	
IAC-OUL	30 30	20.10; 40.90	603.00; 1227.00	138.000	603.00 0	- 4.899	.000	.000	.000	.000	-0.632
IAL-OUR	30 30	26.82; 34.18	804.50; 1025.50	339.500	804.50 0	- 1.851	.064	.065	.032	.001	
IAL-OUC	30 30	29.03; 31.97	871.00; 959.00	406.000	871.00 0	-.767	.443	.456	.228	.007	
IAL-OUL	30 30	20.35; 40.65	610.50; 1219.50	145.500	610.50 0	- 4.752	.000	.000	.000	.000	-0.613
OUR- - OUC	30 30	33.20; 27.80	996.00; 834.00	369.000	834.00 0	- 1.317	.188	.190	.095	.002	
OUR-OUL	30 30	21.98; 39.02	659.00; 1170.00	194.500	659.50 0	- 3.878	.000	.000	.000	.000	-0.500
OUR-C-OUL	30 30	20.45; 40.55	613.50; 1216.50	148.500	613.50 0	- 4.632	.000	.000	.000	.000	-0.598

Density groups for cohesion in texts

Group #	CD density group	N	Density scale
Group 1	Low density group	10	39 to 56 CDs
Group 2	Moderate density group	10	57 to 71 CDs
Group 3	High density group	10	72 & above CDs

Kruskal Wallis results for Exam score & CDS in relation to CD density groups

	Group	N	M	SD	Mdn	Mean Rank	Chi square	df	Asym p. Sig.	r
WPT	Low density	10				6.85				
	Moderate density	10				17.25				
	High density	10				22.40				
	Total	30	381.20	84.076	375.50		16.211	2	.000	0.559
SUPT	Low density	10				10.10				
	Moderate density	10				16.80				
	High density	10				19.60				
	Total	30	20.93	3.999	21.00		6.202	2	.045	0.213
Exam Scores	Low density	10				10.00				
	Moderate density	10				17.25				
	High density	10				19.25				
	Total	30	14.65	1.917	14.75		6.225	2	.044	0.214
CDS	Low density	10				9.80				
	Moderate density	10				17.20				
	High density	10				19.50				
	Total	30	4.33	.620	4.50		7.556	2	.023	0.260

Mann-Whitney U for WPT in relation to CD density groups

Group			
WPT	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	6.70; 14.30	5.65; 15.35	8.45; 12.55
Sum of ranks	67.00; 143.00	56.50; 153.50	84.50; 125.50
MWU	12.000	1.500	29.500
W	67.000	56.500	84.500
Z	-2.876	-3.670	-1.551
Asymp. Sig	.004	.000	.121
Exact Sig. [2*(1-tailed Sig.)]	.003 ^b	.000 ^b	.123 ^b
Exact Sig. (2-tailed)	.003	.000	.127
Exact Sig. (1-tailed)	.001	.000	.064
Point Probability	.000	.000	.005
Effect size (r)	-0.643	-0.820	

a. Grouping Variable: Group

b. Not corrected for ties.

Mann-Whitney U for SUPT in relation to CD density groups

Group			
SUPT	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	8.05; 12.95	7.55; 13.45	9.35; 11.65
Sum of ranks	80.50; 129.50	75.50; 134.50	93.50; 116.50
MWU	25.500	20.500	38.500
W	80.500	75.500	93.500
Z	-1.865	-2.246	-.873
Asymp. Sig	.062	.025	.383
Exact Sig. [2*(1-tailed Sig.)]	.063 ^b	.023 ^b	.393 ^b
Exact Sig. (2-tailed)	.064	.024	.403
Exact Sig. (1-tailed)	.032	.012	.201
Point Probability	.003	.002	.012
Effect size (r)		-0.502	

a. Grouping Variable: Group

b. Not corrected for ties.

Mann-Whitney U for Exam score in relation to CD density groups

Group			
Exam score	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	7.95; 13.05	7.55; 13.45	9.70; 11.30
Sum of ranks	79.50; 130.50	75.50; 134.50	97.00; 113.00
MWU	24.500	20.500	42.000
W	79.500	75.500	97.000
Z	-1.959	-2.266	-.609
Asymp. Sig	.050	.023	.542
Exact Sig. [2*(1-tailed Sig.)]	.052 ^b	.023 ^b	.579 ^b
Exact Sig. (2-tailed)	.052	.022	.560
Exact Sig. (1-tailed)	.026	.011	.280
Point Probability	.003	.001	.012
Effect size (r)		-0.506	

a. Grouping Variable: Group

b. Not corrected for ties.

Mann-Whitney U for CDS in relation to CD density groups

Group			
CDS	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	7.90; 13.10	7.15; 13.85	9.70; 11.30
Sum of ranks	79.00; 131.00	71.50; 138.50	97.00; 113.00
MWU	24.000	16.500	42.000
W	79.000	71.500	97.000
Z	-2.018	-2.580	-.622
Asymp. Sig	.044	.010	.534
Exact Sig. [2*(1-tailed Sig.)]	.052 ^b	.009 ^b	.579 ^b
Exact Sig. (2-tailed)	.049	.008	.560
Exact Sig. (1-tailed)	.024	.004	.280
Point Probability	.006	.001	.026
Effect size (r)	-0.502	-0.576	

a. Grouping Variable: Group

b. Not corrected for ties.

Kruskal Wallis results for CD Categories per density group

	Group	N	M	SD	Mdn	Mean Rank	Chi square	df	Asym p. Sig.	r
R	Low density	10				7.30				
	Moderate density	10				14.75				
	High density	10				24.45				
	Total	30	23.73	10.130			19.140	2	.000	0.66
S	Low density	10				12.95				
	Moderate density	10				12.95				
	High density	10				20.60				
	Total	30	.33	.661			8.482	2	.014	0.29
E	Low density	10				12.30				
	Moderate density	10				18.55				
	High density	10				15.65				
	Total	30	.67	.844			3.079	2	.214	
C	Low density	10				15.35				
	Moderate density	10				16.35				
	High density	10				14.80				
	Total	30	8.23	3.928			.161	2	.923	
L	Low density	10				7.20				
	Moderate density	10				16.60				
	High density	10				22.70				
	Total	30	32.17	10.048			15.769	2	.000	0.543

Mann-Whitney U for Reference in CD density groups

Group			
Reference	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	7.20; 13.80	5.60; 15.40	6.45; 14.55
Sum of ranks	72.00; 138.00	56.00; 154.00	64.50; 145.50
MWU	17.000	1.000	9.500
W	72.000	56.000	64.500
Z	-2.502	-3.711	-3.067
Asymp. Sig	.012	.000	.002
Exact Sig. [2*(1-tailed Sig.)]	.011 ^b	.000 ^b	.001 ^b
Exact Sig. (2-tailed)	.011	.000	.001
Exact Sig. (1-tailed)	.005	.000	.001
Point Probability	.001	.000	.000
Effect size (r)	-0.559	-0.829	-0.685

Mann-Whitney U for Substitution in CD density groups

Group			
Substitution	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	10.50; 10.50	7.95; 13.05	7.95; 13.05
Sum of ranks	105.00; 105.00	79.50; 130.50	79.50; 130.50
MWU	50.000	24.500	24.500
W	105.000	79.500	79.500
Z	.000	-2.304	-2.304
Asymp. Sig	1.000	.021	.021
Exact Sig. [2*(1-tailed Sig.)]	1.000 ^b	.052 ^b	.052 ^b
Exact Sig. (2-tailed)	1.000	.050	.050
Exact Sig. (1-tailed)	.763	.025	.025
Point Probability	.526	.023	.023
Effect size (r)			

Mann-Whitney U for Ellipsis in CD density groups

Group			
Ellipsis	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	8.50; 10.50	9.30; 11.70	11.55; 9.45
Sum of ranks	85.00; 125.00	93.00; 117	115.50; 94.50
MWU	30.000	38.000	39.500
W	85.000	93.000	94.500
Z	-1.678	-1.070	-.863
Asymp. Sig	.093	.284	.388
Exact Sig. [2*(1-tailed Sig.)]	.143 ^b	.393 ^b	.436 ^b
Exact Sig. (2-tailed)	.106	.322	.473
Exact Sig. (1-tailed)	.053	.161	.236
Point Probability	.005	.007	.038
Effect size (r)			

Mann-Whitney U for Conjunction in CD density groups

Group			
Conjunction	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	10.00; 11.00	10.85; 10.15	10.85; 10.15
Sum of ranks	100.00; 110.00	108.00; 101.50	108.00; 101.50
MWU	45.000	46.500	46.500
W	100.000	101.500	101.500
Z	-.380	-.267	-.266
Asymp. Sig	.704	.789	.790
Exact Sig. [2*(1-tailed Sig.)]	.739 ^b	.796 ^b	.796 ^b
Exact Sig. (2-tailed)	.728	.807	.810
Exact Sig. (1-tailed)	.364	.404	.405
Point Probability	.017	.013	.015
Effect size (r)			

Mann-Whitney U for Lexical cohesion in CD density groups

Group			
Lexical cohesion	1 Low & moderate density	2 Low & high density	3 Moderate & high density
N	10; 10	10; 10	10; 10
Mean rank	7.15; 13.85	5.55; 15.45	8.25; 12.75
Sum of ranks	71.50; 138.50	55.50; 154.50	82.50; 127.50
MWU	16.500	.500	27.500
W	71.500	55.500	82.500
Z	-2.537	-3.745	-1.704
Asymp. Sig	.011	.000	.088
Exact Sig. [2*(1-tailed Sig.)]	.009 ^b	.000 ^b	.089 ^b
Exact Sig. (2-tailed)	.010	.000	.093
Exact Sig. (1-tailed)	.005	.000	.046
Point Probability	.001	.000	.004
Effect size (r)	-0.567	-0.837	

Appendix 11: Nonparametric correlation results for RQ 2

Nonparametric correlations for Reference in the 13 move rhetorical structure

			R1	R2	R3
Kendall's tau_b	R1	Correlation Coefficient	1.000	.685**	.621**
		Sig. (2-tailed)	.	.002	.005
		N	13	13	13
	R2	Correlation Coefficient	.685**	1.000	.533*
		Sig. (2-tailed)	.002	.	.018
		N	13	13	13
	R3	Correlation Coefficient	.621**	.533*	1.000
		Sig. (2-tailed)	.005	.018	.
		N	13	13	13

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Nonparametric correlations for S & E in the 13 move rhetorical structure

			S1	S2	S3	E1	E2	E3
Kendall's tau_b	S1	Correlation Coefficient	1.000	.	.166	.266	.409	.409
		Sig. (2-tailed)	.	.	.546	.334	.156	.156
		N	13	13	13	13	13	13
	S2	Correlation Coefficient	.	.	.	.	.	.
		Sig. (2-tailed)	.	.	.	.	.	.
		N	13	13	13	13	13	13
	S3	Correlation Coefficient	.166	.	1.000	.537*	.166	.166
		Sig. (2-tailed)	.546	.	.	.042	.546	.546
		N	13	13	13	13	13	13
	E1	Correlation Coefficient	.266	.	.537*	1.000	.733**	.733**
		Sig. (2-tailed)	.334	.	.042	.	.008	.008
		N	13	13	13	13	13	13
	E2	Correlation Coefficient	.409	.	.166	.733**	1.000	1.000*
		Sig. (2-tailed)	.156	.	.546	.008	.	.
		N	13	13	13	13	13	13
	E3	Correlation Coefficient	.409	.	.166	.733**	1.000*	1.000
		Sig. (2-tailed)	.156	.	.546	.008	.	.
		N	13	13	13	13	13	13

* . Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Nonparametric correlations for Conjunction in the 13 move rhetorical structure

			C1	C2	C3	C4
Kendall's tau_b	C1	Correlation Coefficient	1.000	.359	.383	.052
		Sig. (2-tailed)	.	.133	.112	.831
		N	13	13	13	13
	C2	Correlation Coefficient	.359	1.000	.432	.211
		Sig. (2-tailed)	.133	.	.057	.359
		N	13	13	13	13
	C3	Correlation Coefficient	.383	.432	1.000	.185
		Sig. (2-tailed)	.112	.057	.	.427
		N	13	13	13	13
	C4	Correlation Coefficient	.052	.211	.185	1.000
		Sig. (2-tailed)	.831	.359	.427	.
		N	13	13	13	13

Nonparametric correlations for Lexical cohesion in the 13 move rhetorical structure

			L1	L2	L3	L4	L5
Kendall's tau_b	L1	Correlation Coefficient	1.000	.658**	.354	.473*	.644**
		Sig. (2-tailed)	.	.003	.106	.033	.004
		N	13	13	13	13	13
	L2	Correlation Coefficient	.658**	1.000	.257	.657**	.529*
		Sig. (2-tailed)	.003	.	.254	.004	.021
		N	13	13	13	13	13
	L3	Correlation Coefficient	.354	.257	1.000	.227	.586**
		Sig. (2-tailed)	.106	.254	.	.312	.009
		N	13	13	13	13	13
	L4	Correlation Coefficient	.473*	.657**	.227	1.000	.599**
		Sig. (2-tailed)	.033	.004	.312	.	.009
		N	13	13	13	13	13
	L5	Correlation Coefficient	.644**	.529*	.586**	.599**	1.000
		Sig. (2-tailed)	.004	.021	.009	.009	.
		N	13	13	13	13	13

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation results for moves in the Introduction stage in relation to CD categories (n = 18)

Kendall's tau_b		Gambit	Information	Proposition	Evaluation	Marker
Gambit	Correlation Coefficient	1.000	.623**	.378	.700**	.653**
	Sig. (2-tailed)	.	.002	.062	.001	.002
	N	18	18	18	18	18
Information	Correlation Coefficient	.623**	1.000	.515**	.666**	.692**
	Sig. (2-tailed)	.002	.	.006	.001	.000
	N	18	18	18	18	18
Proposition	Correlation Coefficient	.378	.515**	1.000	.545**	.450*
	Sig. (2-tailed)	.062	.006	.	.006	.023
	N	18	18	18	18	18
Evaluation	Correlation Coefficient	.700**	.666**	.545**	1.000	.848**
	Sig. (2-tailed)	.001	.001	.006	.	.000
	N	18	18	18	18	18
Marker	Correlation Coefficient	.653**	.692**	.450*	.848**	1.000
	Sig. (2-tailed)	.002	.000	.023	.000	.
	N	18	18	18	18	18

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation results for moves in the Argument stage in relation to CD categories (n = 18)

Kendall's tau_b		ArgMarker	ArgRest	ArgClaim	ArgSupp
ArgMarker	Correlation Coefficient	1.000	.448*	.461*	.453*
	Sig. (2-tailed)	.	.021	.015	.015
	N	18	18	18	18
	ArgRest	Correlation Coefficient	.448*	1.000	.722**
ArgRest	Sig. (2-tailed)	.021	.	.000	.000
	N	18	18	18	18
	ArgClaim	Correlation Coefficient	.461*	.722**	1.000
	Sig. (2-tailed)	.015	.000	.	.000
ArgClaim	N	18	18	18	18
	ArgSupp	Correlation Coefficient	.453*	.669**	.731**
	Sig. (2-tailed)	.015	.000	.000	.
	N	18	18	18	18

* . Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation results for moves in the Conclusion stage in relation to CD categories (n = 18)

			ConMarker	ConCons	ConAffirm	ConClose
Kendall's tau_b	ConMarker	Correlation Coefficient	1.000	.350	.015	.273
		Sig. (2-tailed)	.	.105	.942	.217
		N	18	18	18	18
	ConCons	Correlation Coefficient	.350	1.000	.535**	.501*
		Sig. (2-tailed)	.105	.	.006	.013
		N	18	18	18	18
	ConAffirm	Correlation Coefficient	.015	.535**	1.000	.661**
		Sig. (2-tailed)	.942	.006	.	.001
		N	18	18	18	18
	ConClose	Correlation Coefficient	.273	.501*	.661**	1.000
		Sig. (2-tailed)	.217	.013	.001	.
		N	18	18	18	18

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Appendix12: Structured questionnaire for teachers

The questionnaire is based on 50 structured items and, hopefully, won't take you more than 15-20 minutes to complete. The items are presented on a five-point scale (1-5), and you are requested to check one response for each item.

I appreciate and thank you for your time and interest in completing this questionnaire.

	Teachers' perceptions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		1	2	3	4	5
1	Students write in English for academic purposes quite often					
2	Writing in English is the same as writing in Arabic					
3	Students use knowledge of Arabic while writing in English					
4	Students also write in English for non-academic purposes					
5	Students have sufficient vocabulary to help them write in English					
6	Students use knowledge of grammar to write correctly in English					
7	Students know how to write different types of sentences					
8	Students know how to write topic sentence and thesis statement					
9	Students know how to write supporting detail for the topic sentence					
10	Students know how to write different types of paragraphs					
11	Students know how to write cohesive and coherent paragraphs					
12	Students know how to write argumentative essays					
13	Students make appropriate use of pronouns.					
14	Students make appropriate use of coordination.					
15	Students make appropriate use of subordination.					
16	Students make appropriate use of articles/determiners.					
17	Students make appropriate use of collocations.					
18	Students make appropriate use of repetition of ideas.					
19	Students replace a word or a phrase or a clause for variety					
20	Students use ellipsis (omission of a word, phrase or clause).					

21	Students use counter arguments while writing in English					
22	Students express problems related to the topic					
23	Students write solution to these problems					
24	Students write logically that appeals to the reader					
25	Students are explicit in their expression					
26	Students are suggestive in their expression					
27	Students use cause and effect patterns effectively.					
28	Students use comparison and contrast patterns effectively.					
29	Students use examples to substantiate their point of view.					
30	Students develop independent opinions.					
31	Students know how to agree with a proposition.					
32	Students know how to refute a proposition.					
33	Students know how to take a stance.					
34	Students know how to substantiate their stance.					
35	Students know how to synthesize information.					
36	Students use facts and figures to illustrate a point of view.					
37	Students feel gratified when appreciated for their writing skills.					
38	Students like to do collaborative writing tasks.					
39	Students like to work independently.					
40	Students receive constant feedback and support from teachers.					
41	Students receive positive feedback from family and peers.					
42	Students are explicitly taught academic writing functions.					
43	Students are motivated enough to learn writing skill for academic purposes.					
44	Academic writing is useful to your present and future needs.					
45	Students relate competence in writing to real life benefits.					
46	Students freely express positive					

	learning experiences with peers.					
47	Students freely express negative learning experiences with peers.					
48	Good writing skills are highly valued in Arab culture.					
49	Arab culture values argumentation.					
50	Arab culture values critical judgment					

Appendix 13: Sample of completed students' questionnaire

4

The questionnaire is based on 50 structured items and, hopefully, won't take you more than 15-20 minutes to complete. The items are presented on a five-point scale (1 – 5), and you are requested to check one response for each item.

I appreciate and thank you for your time and interest in completing this questionnaire.

	Students' perceptions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		1	2	3	4	5
1	I can write in English for my studies quite often	✓	✓			
2	I can say that writing in English is the same as writing in Arabic				✓	
3	I can use knowledge of Arabic while writing in English		✓			
4	I can also write in English when I am not writing for my studies			✓		
5	I can say I have sufficient vocabulary to help me write in English		✓			
6	I can use knowledge of grammar to write correctly in English		✓			
7	I can write different types of sentences			✓		
8	I can write topic sentence and thesis statement		✓			
9	I can write supporting detail for the topic sentence			✓	✓	
10	I can write different types of paragraphs					✓
11	I can write cohesive and coherent paragraphs				✓	
12	I can write argumentative essays			✓		
13	I can make appropriate use of pronouns.		✓			
14	I can make appropriate use of coordination.			✓		
15	I can make appropriate use of subordination.		✓			
16	I can make appropriate use of articles/determiners.			✓		
17	I can make appropriate use of collocations.	✓				
18	I can make appropriate use of repetition of ideas.		✓			
19	I can replace a word or a phrase or a clause for variety		✓			
20	I can use ellipsis (omission of a word, phrase or clause).	✓		✓		
21	I can use counter arguments while writing in English			✓		
22	I can express problems related to the topic			✓		

4

23	I can write solution to these problems			✓		
24	I can write logically that appeals to the reader			✓		
25	I can be explicit in my expression		✓			
26	I can be suggestive in my expression			✓		
27	I can use cause and effect patterns effectively.				✓	
28	I can use comparison and contrast patterns effectively.				✓	
29	I can use examples to substantiate their point of view.		✓			
30	I can develop independent opinions.	✓				
31	I can agree with a proposition.	✓	✓		✓	
32	I can refute a proposition.			✓		
33	I can take a stance.			✓		✓
34	I can substantiate my stance.			✓		
35	I can synthesize information.					✓
36	I can use facts and figures to illustrate a point of view.				✓	
37	I can feel gratified when I am appreciated for my writing skills.			✓		
38	I can do collaborative writing tasks.			✓		
39	I can work independently.	✓				
40	I can receive constant feedback and support from teachers.		✓			
41	I can receive positive feedback from family and peers.			✓		
42	I can say students are explicitly taught academic writing functions.		✓			
43	I can be motivated enough to learn writing skill for academic purposes.			✓		
44	I can say that academic writing is useful to my present and future needs.				✓	
45	I can relate competence in writing to real life benefits.	✓		✓		
46	I can freely express my positive learning experiences with my peers.					✓
47	I can freely express my negative learning experiences with my peers.			✓		
48	I can say that good writing skills are highly valued in Arab culture.			✓		
49	I can say that Arab culture values argumentation.		✓			
50	I can say that Arab culture values critical judgment			✓		

Appendix 14: Factor distribution of questionnaire items

Code	Teaching & Learning of Academic Writing: TL
TL1	Students write in English for academic purposes quite often.
TL2	Students also write in English for non-academic purposes
TL3	Students feel gratified when appreciated for my writing skills.
TL4	Students like to do collaborative writing tasks.
TL5	Students like to work independently.
TL6	Students receive constant feedback and support from teachers.
TL7	Students receive positive feedback from family and peers.
TL8	Students are explicitly taught academic writing functions.
TL9	Students are motivated enough to learn writing skill for academic purposes.
TL10	Academic writing is useful to students' present and future needs.
TL11	Students relate competence in writing to real life benefits.
TL12	Students freely express their positive learning experiences with their peers.
TL13	Students freely express their negative learning experiences their peers.
	Arabic Language & Culture: ALC
ALC1	Writing in English is the same as writing in Arabic.
ALC2	Students use knowledge of Arabic while writing in English.
ALC3	Good writing skills are highly valued in Arab culture.
ALC4	Arab culture values argumentation.
ALC5	Arab culture values critical judgment.
	Language Knowledge: LK
LK1	Students have sufficient vocabulary to help me write in English.
LK2	Students know how to use knowledge of grammar to write correctly in English.
LK3	Students know how to write different types of sentences.
LK4	Students know how to write topic sentence and thesis statement.
LK5	Students know how to write supporting detail for the topic sentence.
	Text Organization: TO
TO1	Students know how to write different types of paragraphs.
TO2	Students know how to write cohesive and coherent paragraphs.
TO3	Students know how to write argumentative essays.
	Cohesion: COH
COH1	Students make appropriate use of pronouns.
COH2	Students make appropriate use of coordination.
COH3	Students make appropriate use of subordination.
COH4	Students make appropriate use of articles/determiners.
COH5	Students make appropriate use of collocations.
COH6	Students make appropriate use of repetition of ideas.
COH7	Students replace a word or a phrase or a clause for variety.
COH8	Students use ellipsis (omission of a word, phrase or clause).
	Rhetorical Functions: RF
RF1	Students use counter arguments while writing in English.
RF2	Students express problems related to the topic.
RF3	Students write solution to these problems.
RF4	Students write logically that appeals to the reader.
RF5	Students are explicit in their expression.
RF6	Students are suggestive in their expression.
RF7	Students use cause and effect patterns effectively.

RF8	Students use comparison and contrast patterns effectively.
RF9	Students use examples to substantiate their point of view.
RF10	Students develop independent opinions.
RF11	Students know how to agree with a proposition.
RF12	Students know how to refute a proposition.
RF13	Students know how to take a stance.
RF14	Students know how to substantiate my stance.
RF15	Students know how to synthesize information.
RF16	Students use facts and figures to illustrate a point of view.

Appendix 15: Percentage scores for items on teachers' & students' surveys

Percentage scores for TL factor

TL %	Teachers' perceptions N = 112					Students' perceptions N = 60				
	SD	D	N	A	SA	SD	D	N	A	SA
TL1	5	36	17	32	10	13	60	25	-	2
TL2	4	47	13	25	9	22	50	20	5	3
TL3	25	62	7	4	2	12	37	33	15	3
TL4	13	55	15	13	3	12	50	25	13	
TL5	2	34	24	35	5	22	51	14	10	3
TL6	25	55	10	10	0	15	60	15	5	5
TL7	4	23	47	21	5	17	43	35	3	2
TL8	5	47	25	17	5	5	48	37	8	2
TL9	3	29	20	38	10	10	38	43	7	2
TL10	46	45	2	5	2	22	40	20	12	7
TL11	4	42	30	22	2					
TL12	4	54	22	18	2	15	43	32	7	2
TL13	3	38	37	22	0	10	48	33	7	2

Percentage scores for ALC factor

ALC %	Teachers' perceptions N = 112					Students' perceptions N = 60				
	SD	D	N	A	SA	SD	D	N	A	SA
ALC1		4	4	53	39	-	13	22	50	15
ALC2	19	64	13	4	1	13	35	32	18	-
ALC3	13	43	27	13	4	10	48	32	7	3
ALC4	5	28	36	24	7	10	42	40	5	3
ALC5	3	27	28	32	10	18	28	37	12	5

Percentage scores for LK factor

LK %	Teachers' perceptions N = 112					Students' perceptions N = 60				
	SD	D	N	A	SA	SD	D	N	A	SA
LK1	2	9	14	63	12	3	60	27	7	3
LK2	3	51	16	29	1	7	45	37	7	2
LK3		27	24	44	5	15	55	18	8	3
LK4	1	30	23	40	5	22	50	18	7	-
LK5	1	42	19	34	4	18	57	17	8	-

Percentage scores for TO factor

TO %	Teachers' perceptions N = 112					Students' perceptions N = 60				
	SD	D	N	A	SA	SD	D	N	A	SA
TO1		28	26	43	4	15	53	18	8	3
TO2		10	25	58	7	13	35	40	7	2
TO3		19	18	53	11	2	53	32	8	3

Percentage scores for COH factor

COH %	Teachers' perceptions N = 112					Students' perceptions N = 60				
	SD	D	N	A	SA	SD	D	N	A	SA
COH1		48	29	22	1	10	40	40	5	2
COH2		17	38	41	4	12	47	35	5	2
COH3		11	36	49	4	8	52	30	7	3
COH4		35	26	35	4	7	42	38	12	2
COH5		10	26	59	5	7	23	58	10	2
COH6		22	32	42	4	13	43	33	10	-
COH7	1	15	17	58	8	10	47	28	12	2
COH8	4	13	22	51	10	3	37	47	12	-

Percentage scores for RF factor

RF %	Teachers' perceptions N = 112					Students' perceptions N = 60				
	SD	D	N	A	SA	SD	D	N	A	SA
RF1		21	17	53	10	8	33	52	7	-
RF2	2	49	21	27	1	18	43	30	8	-
RF3	3	36	26	34	2	20	42	35	3	-
RF4		19	21	51	8	10	48	33	8	-
RF5	1	24	29	42	4	10	43	27	17	-
RF6		23	30	43	4	12	53	23	8	2
RF7	2	28	21	44	6	12	52	20	17	-
RF8	1	28	21	44	7	15	48	22	13	-
RF9	1	38	25	32	4	12	55	30	2	2
RF10	3	40	23	31	3	18	57	17	3	3
RF11		32	26	39	3	13	50	28	5	3
RF12		28	29	40	3	13	32	40	12	2
RF13		26	32	39	3	7	45	42	3	3
RF14		14	38	45	2	8	38	37	12	2
RF15	1	13	24	53	9	5	43	30	17	2
RF16		32	19	43	6	7	47	32	13	2

Appendix 16: Nonparametric correlation results for teachers' survey

Correlations of mean scores between teachers' & students' perceptions

Spearman's rho		TLTP	TLSP	ALCTP	ALCSP	LKTP	LKSP	TOTP	TOSP	COHTP	COHSP	RFTP	RFSP
TLTP	CC	1.000	-.037	.233*	-.092	.473**	-.086	.399**	-.146	.484**	-.139	.614**	-.126
	Sig. (2-tailed)		.781	.013	.482	.000	.516	.000	.267	.000	.290	.000	.336
	N	112	60	112	60	112	60	112	60	112	60	112	60
TLSP	CC	-.037	1.000	-.180	.451**	.098	.538**	.110	.552**	-.060	.581**	-.016	.675**
	Sig. (2-tailed)	.781		.169	.000	.458	.000	.404	.000	.650	.000	.904	.000
	N	60	60	60	60	60	60	60	60	60	60	60	60
ALCTP	CC	.233*	-.180	1.000	.047	.083	-.302*	.175	-.197	.148	-.060	.205*	-.271*
	Sig. (2-tailed)	.013	.169		.721	.382	.019	.064	.132	.120	.649	.030	.036
	N	112	60	112	60	112	60	112	60	112	60	112	60
ALCSP	CC	-.092	.451**	.047	1.000	-.116	.285*	.059	.417**	-.087	.414**	-.042	.302*
	Sig. (2-tailed)	.482	.000	.721		.377	.027	.655	.001	.509	.001	.750	.019
	N	60	60	60	60	60	60	60	60	60	60	60	60
LKTP	CC	.473**	.098	.083	-.116	1.000	-.155	.687**	.052	.645**	-.177	.598**	-.150
	Sig. (2-tailed)	.000	.458	.382	.377		.238	.000	.691	.000	.177	.000	.254
	N	112	60	112	60	112	60	112	60	112	60	112	60
LKSP	CC	-.086	.538**	-.302*	.285*	-.155	1.000	-.145	.469**	-.166	.564**	-.221	.765**
	Sig. (2-tailed)	.516	.000	.019	.027	.238		.270	.000	.204	.000	.089	.000
	N	60	60	60	60	60	60	60	60	60	60	60	60
TOTP	CC	.399**	.110	.175	.059	.687**	-.145	1.000	.025	.603**	-.152	.661**	-.075
	Sig. (2-tailed)	.000	.404	.064	.655	.000	.270		.851	.000	.245	.000	.571
	N	112	60	112	60	112	60	112	60	112	60	112	60
TOSP	CC	-.146	.552**	-.197	.417**	.052	.469**	.025	1.000	.067	.561**	-.172	.536**
	Sig. (2-tailed)	.267	.000	.132	.001	.691	.000	.851		.612	.000	.190	.000
	N	60	60	60	60	60	60	60	60	60	60	60	60
COHTP	CC	.484**	-.060	.148	-.087	.645**	-.166	.603**	.067	1.000	-.192	.657**	-.169
	Sig. (2-tailed)	.000	.650	.120	.509	.000	.204	.000	.612		.142	.000	.196
	N	112	60	112	60	112	60	112	60	112	60	112	60
COHSP	CC	-.139	.581**	-.060	.414**	-.177	.564**	-.152	.561**	-.192	1.000	-.137	.674**

	Sig. (2-tailed)	.290	.000	.649	.001	.177	.000	.245	.000	.142		.298	.000
	N	60	60	60	60	60	60	60	60	60	60	60	60
RFTP	CC	.614**	-.016	.205*	-.042	.598**	-.221	.661**	-.172	.657**	-.137	1.000	-.162
	Sig. (2-tailed)	.000	.904	.030	.750	.000	.089	.000	.190	.000	.298		.215
	N	112	60	112	60	112	60	112	60	112	60	112	60
RFSP	CC	-.126	.675**	-.271*	.302*	-.150	.765**	-.075	.536**	-.169	.674**	-.162	1.000
	Sig. (2-tailed)	.336	.000	.036	.019	.254	.000	.571	.000	.196	.000	.215	
	N	60	60	60	60	60	60	60	60	60	60	60	60

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation results for TL factor on teachers' survey

Spearman's rho		TL1	TL2	TL3	TL4	TL5	TL6	TL7	TL8	TL9	TL10	TL11	TL12	TL13
TL1.	CC	1.000	.191*	.216*	.110	.234*	.324**	.192*	.399**	.278**	.097	.299**	.217*	.120
	Sig. (2-tailed)		.045	.022	.253	.014	.001	.042	.000	.003	.309	.001	.022	.213
	N	112	110	112	110	111	111	112	109	111	112	111	111	110
TL2	CC	.191*	1.000	-.051	-.180	.300**	-.132	.020	.042	-.015	.058	.295**	-.065	.107
	Sig. (2-tailed)	.045		.594	.062	.001	.172	.835	.664	.877	.546	.002	.503	.272
	N	110	110	110	108	110	109	110	107	109	110	109	110	108
TL3	CC	.216*	-.051	1.000	.252**	.275**	.245**	.195*	.331**	.188*	.275**	.286**	.291**	.149
	Sig. (2-tailed)	.022	.594		.008	.004	.009	.039	.000	.049	.003	.002	.002	.122
	N	112	110	112	110	111	111	112	109	111	112	111	111	110
TL4	CC	.110	-.180	.252**	1.000	-.228*	.192*	.258**	.120	.218*	.081	.097	.262**	-.005
	Sig. (2-tailed)	.253	.062	.008		.017	.045	.007	.220	.023	.400	.314	.006	.961
	N	110	108	110	110	109	109	110	107	109	110	109	109	109
TL5	CC	.234*	.300**	.275**	-.228*	1.000	.093	.204*	.259**	.324**	-.063	.303**	.045	.097
	Sig. (2-tailed)	.014	.001	.004	.017		.334	.032	.007	.001	.512	.001	.643	.315
	N	111	110	111	109	111	110	111	108	110	111	110	111	109
TL6	CC	.324**	-.132	.245**	.192*	.093	1.000	.182	.381**	.164	.080	.196*	.254**	.056
	Sig. (2-tailed)	.001	.172	.009	.045	.334		.057	.000	.087	.405	.039	.007	.562
	N	111	109	111	109	110	111	111	108	110	111	111	110	109
TL7	CC	.192*	.020	.195*	.258**	.204*	.182	1.000	.389**	.298**	.122	.226*	.352**	.136
	Sig. (2-tailed)	.042	.835	.039	.007	.032	.057		.000	.001	.201	.017	.000	.157

	N	112	110	112	110	111	111	112	109	111	112	111	111	110
TL8	CC	.399**	.042	.331**	.120	.259**	.381**	.389**	1.000	.393**	-.029	.292**	.364**	-.046
	Sig. (2-tailed)	.000	.664	.000	.220	.007	.000	.000		.000	.765	.002	.000	.638
	N	109	107	109	107	108	108	109	109	108	109	108	108	107
TL9	CC	.278**	-.015	.188*	.218*	.324**	.164	.298**	.393**	1.000	.068	.463**	.321**	-.005
	Sig. (2-tailed)	.003	.877	.049	.023	.001	.087	.001	.000		.478	.000	.001	.962
	N	111	109	111	109	110	110	111	108	111	111	110	110	109
TL10	CC	.097	.058	.275**	.081	-.063	.080	.122	-.029	.068	1.000	.197*	.047	.210*
	Sig. (2-tailed)	.309	.546	.003	.400	.512	.405	.201	.765	.478		.038	.621	.027
	N	112	110	112	110	111	111	112	109	111	112	111	111	110
TL11	CC	.299**	.295**	.286**	.097	.303**	.196*	.226*	.292**	.463**	.197*	1.000	.234*	-.004
	Sig. (2-tailed)	.001	.002	.002	.314	.001	.039	.017	.002	.000	.038		.014	.969
	N	111	109	111	109	110	111	111	108	110	111	111	110	109
TL12	CC	.217*	-.065	.291**	.262**	.045	.254**	.352**	.364**	.321**	.047	.234*	1.000	.219*
	Sig. (2-tailed)	.022	.503	.002	.006	.643	.007	.000	.000	.001	.621	.014		.022
	N	111	110	111	109	111	110	111	108	110	111	110	111	109
TL13	CC	.120	.107	.149	-.005	.097	.056	.136	-.046	-.005	.210*	-.004	.219*	1.000
	Sig. (2-tailed)	.213	.272	.122	.961	.315	.562	.157	.638	.962	.027	.969	.022	
	N	110	108	110	109	109	109	110	107	109	110	109	109	110

Correlation results for ALC factor on teachers' survey

			ALC1	ALC2	ALC3	ALC4	ALC5
Spearman's rho	ALC1	Correlation Coefficient	1.000	.139	.049	.011	.023
		Sig. (2-tailed)		.144	.608	.912	.809
		N	112	112	112	111	112
	ALC2	Correlation Coefficient	.139	1.000	.070	-.020	-.048
		Sig. (2-tailed)	.144		.464	.837	.614
		N	112	112	112	111	112
	ALC3	Correlation Coefficient	.049	.070	1.000	.533**	.550**
		Sig. (2-tailed)	.608	.464		.000	.000
		N	112	112	112	111	112
	ALC4	Correlation Coefficient	.011	-.020	.533**	1.000	.766**
		Sig. (2-tailed)	.912	.837	.000		.000
		N	111	111	111	111	111
	ALC5	Correlation Coefficient	.023	-.048	.550**	.766**	1.000
		Sig. (2-tailed)	.809	.614	.000	.000	
		N	112	112	112	111	112

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation results for LK factor on teachers' survey

			LK1	LK2	LK3	LK4	LK5
Spearman's rho	LK1	Correlation Coefficient	1.000	.157	.450**	.230*	.255**
		Sig. (2-tailed)		.102	.000	.016	.007
		N	111	110	111	110	110
	LK2	Correlation Coefficient	.157	1.000	.278**	-.069	.089
		Sig. (2-tailed)	.102		.003	.477	.357
		N	110	111	111	110	110
	LK3	Correlation Coefficient	.450**	.278**	1.000	.397**	.419**
		Sig. (2-tailed)	.000	.003		.000	.000
		N	111	111	112	111	111
	LK4	Correlation Coefficient	.230*	-.069	.397**	1.000	.748**
		Sig. (2-tailed)	.016	.477	.000		.000
		N	110	110	111	111	110
	LK5	Correlation Coefficient	.255**	.089	.419**	.748**	1.000
		Sig. (2-tailed)	.007	.357	.000	.000	
		N	110	110	111	110	111

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation results for TO factor on teachers' survey

			TO1	TO2	TO3
Spearman's rho	TO1	Correlation Coefficient	1.000	.485**	.501**
		Sig. (2-tailed)		.000	.000
		N	112	111	112
	TO2	Correlation Coefficient	.485**	1.000	.639**
		Sig. (2-tailed)	.000		.000
		N	111	111	111
	TO3	Correlation Coefficient	.501**	.639**	1.000
		Sig. (2-tailed)	.000	.000	
		N	112	111	112

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation results for COH factor on teachers' survey

		COH1	COH2	COH3	COH4	COH5	COH6	COH7	COH8
Spearman's Rho	COH1								
	Correlation Coefficient	1.000	.433**	.418**	.351**	.291**	.295**	.287**	-.005
	Sig. (2-tailed)		.000	.000	.000	.002	.002	.002	.955
	N	111	111	109	111	111	110	109	110
	COH2								
	Correlation Coefficient	.433**	1.000	.604**	.357**	.178	.212*	.213*	.033
	Sig. (2-tailed)	.000		.000	.000	.060	.026	.025	.735
	N	111	112	110	111	112	111	110	111
	COH3								
	Correlation Coefficient	.418**	.604**	1.000	.372**	.413**	.181	.194*	.194*
	Sig. (2-tailed)	.000	.000		.000	.000	.058	.044	.043
	N	109	110	110	109	110	110	109	109
	COH4								
	Correlation Coefficient	.351**	.357**	.372**	1.000	.300**	.121	.234*	-.047
	Sig. (2-tailed)	.000	.000	.000		.001	.207	.014	.629
	N	111	111	109	111	111	110	109	110
	COH5								
	Correlation Coefficient	.291**	.178	.413**	.300**	1.000	.441**	.386**	.195*
	Sig. (2-tailed)	.002	.060	.000	.001		.000	.000	.040
	N	111	112	110	111	112	111	110	111
	COH6								
	Correlation Coefficient	.295**	.212*	.181	.121	.441**	1.000	.378**	.236*
	Sig. (2-tailed)	.002	.026	.058	.207	.000		.000	.013
	N	110	111	110	110	111	111	110	110
	COH7								
	Correlation Coefficient	.287**	.213*	.194*	.234*	.386**	.378**	1.000	.279**
	Sig. (2-tailed)	.002	.025	.044	.014	.000	.000		.003
	N	109	110	109	109	110	110	110	109
	COH8								
	Correlation Coefficient	-.005	.033	.194*	-.047	.195*	.236*	.279**	1.000
	Sig. (2-tailed)	.955	.735	.043	.629	.040	.013	.003	
	N	110	111	109	110	111	110	109	111

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation results for RF factor on teachers' survey

Spearman's rho		RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	RF10	RF11	RF12	RF13	RF14	RF15	RF16
RF1	CC	1.000	.325**	.472**	.551**	.333**	.371**	.449**	.509**	.384**	.476**	.399**	.447**	.399**	.349**	.563**	.388**
	Sig. (2-tailed)		.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	110	108	110	110	109	109	109	109	109	110	110	110	109	109	110	109
RF2	CC	.325**	1.000	.624**	.231*	.215*	.309**	.274**	.267**	.251**	.254**	.197*	.312**	.284**	.314**	.261**	.163
	Sig. (2-tailed)	.001		.000	.016	.025	.001	.004	.005	.008	.008	.039	.001	.003	.001	.006	.090
	N	108	110	110	109	109	109	109	109	109	109	110	110	109	108	110	109
RF3	CC	.472**	.624**	1.000	.455**	.321**	.414**	.444**	.439**	.348**	.384**	.370**	.401**	.399**	.335**	.509**	.300**
	Sig. (2-tailed)	.000	.000		.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.001
	N	110	110	112	111	111	111	111	111	111	111	112	112	111	110	112	111
RF4	CC	.551**	.231*	.455**	1.000	.395**	.469**	.636**	.623**	.512**	.390**	.402**	.432**	.473**	.557**	.596**	.373**
	Sig. (2-tailed)	.000	.016	.000		.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	110	109	111	111	110	110	110	110	110	110	111	111	110	110	111	110
RF5	CC	.333**	.215*	.321**	.395**	1.000	.487**	.338**	.349**	.237*	.424**	.392**	.421**	.396**	.297**	.430**	.357**
	Sig. (2-tailed)	.000	.025	.001	.000		.000	.000	.000	.013	.000	.000	.000	.000	.002	.000	.000
	N	109	109	111	110	111	110	110	110	110	110	111	111	110	109	111	110
RF6	CC	.371**	.309**	.414**	.469**	.487**	1.000	.482**	.488**	.446**	.388**	.405**	.505**	.359**	.323**	.516**	.344**
	Sig. (2-tailed)	.000	.001	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.001	.000	.000
	N	109	109	111	110	110	111	110	110	110	110	111	111	110	109	111	110
RF7	CC	.449**	.274**	.444**	.636**	.338**	.482**	1.000	.802**	.459**	.338**	.420**	.449**	.445**	.520**	.624**	.279**
	Sig. (2-tailed)	.000	.004	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000	.003
	N	109	109	111	110	110	110	111	110	110	110	111	111	110	109	111	110
RF8	CC	.509**	.267**	.439**	.623**	.349**	.488**	.802**	1.000	.548**	.457**	.381**	.453**	.456**	.485**	.640**	.439**
	Sig. (2-tailed)	.000	.005	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	109	109	111	110	110	110	110	111	110	110	111	111	110	109	111	110
RF9	CC	.384**	.251**	.348**	.512**	.237*	.446**	.459**	.548**	1.000	.390**	.470**	.527**	.465**	.487**	.431**	.375**
	Sig. (2-tailed)	.000	.008	.000	.000	.013	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	109	109	111	110	110	110	110	110	111	110	111	111	111	109	111	110
RF10	CC	.476**	.254**	.384**	.390**	.424**	.388**	.338**	.457**	.390**	1.000	.453**	.395**	.386**	.261**	.369**	.395**

	Sig. (2-tailed)	.000	.008	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.006	.000	.000
	N	110	109	111	110	110	110	110	110	110	111	111	111	110	109	111	110
RF11	CC	.399**	.197*	.370**	.402**	.392**	.405**	.420**	.381**	.470**	.453**	1.000	.821**	.604**	.387**	.386**	.427**
	Sig. (2-tailed)	.000	.039	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	110	110	112	111	111	111	111	111	111	111	112	112	111	110	112	111
RF12	CC	.447**	.312**	.401**	.432**	.421**	.505**	.449**	.453**	.527**	.395**	.821**	1.000	.586**	.420**	.431**	.439**
	Sig. (2-tailed)	.000	.001	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	110	110	112	111	111	111	111	111	111	111	112	112	111	110	112	111
RF13	CC	.399**	.284**	.399**	.473**	.396**	.359**	.445**	.456**	.465**	.386**	.604**	.586**	1.000	.655**	.519**	.306**
	Sig. (2-tailed)	.000	.003	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.001
	N	109	109	111	110	110	110	110	110	111	110	111	111	111	109	111	110
RF14	CC	.349**	.314**	.335**	.557**	.297**	.323**	.520**	.485**	.487**	.261**	.387**	.420**	.655**	1.000	.522**	.352**
	Sig. (2-tailed)	.000	.001	.000	.000	.002	.001	.000	.000	.000	.006	.000	.000	.000		.000	.000
	N	109	108	110	110	109	109	109	109	109	109	110	110	109	110	110	109
RF15	CC	.563**	.261**	.509**	.596**	.430**	.516**	.624**	.640**	.431**	.369**	.386**	.431**	.519**	.522**	1.000	.355**
	Sig. (2-tailed)	.000	.006	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000
	N	110	110	112	111	111	111	111	111	111	111	112	112	111	110	112	111
RF16	CC	.388**	.163	.300**	.373**	.357**	.344**	.279**	.439**	.375**	.395**	.427**	.439**	.306**	.352**	.355**	1.000
	Sig. (2-tailed)	.000	.090	.001	.000	.000	.000	.003	.000	.000	.000	.000	.000	.001	.000	.000	
	N	109	109	111	110	110	110	110	110	110	110	111	111	110	109	111	111

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Appendix 17: Nonparametric correlation analysis for students' survey

Correlation results for TL factor on students' survey

Spearman's rho		TL1	TL2	TL3	TL4	TL5	TL6	TL7	TL8	TL9	TL10	TL11	TL12	TL13
TL1.	CC	1.000	.458**	.339**	.278*	.405**	.249	.197	.285*	.358**	.242	.572**	.254	.155
	Sig. (2-tailed)		.000	.009	.031	.001	.058	.132	.027	.005	.062	.000	.052	.240
	N	60	57	59	60	59	59	60	60	60	60	60	59	59
TL2	CC	.458**	1.000	.228	.284*	.187	.039	.217	.246	.188	.123	.365**	.180	.195
	Sig. (2-tailed)	.000		.090	.032	.167	.774	.104	.066	.161	.362	.005	.185	.150
	N	57	57	56	57	56	56	57	57	57	57	57	56	56
TL3	CC	.339**	.228	1.000	.446**	.516**	.414**	.325*	.413**	.517**	.352**	.328*	.394**	.262*
	Sig. (2-tailed)	.009	.090		.000	.000	.001	.012	.001	.000	.006	.011	.002	.047
	N	59	56	59	59	58	58	59	59	59	59	59	58	58
TL4	CC	.278*	.284*	.446**	1.000	.393**	.430**	.282*	.407**	.385**	.344**	.338**	.319*	.096
	Sig. (2-tailed)	.031	.032	.000		.002	.001	.029	.001	.002	.007	.008	.014	.469
	N	60	57	59	60	59	59	60	60	60	60	60	59	59
TL5	CC	.405**	.187	.516**	.393**	1.000	.391**	.235	.182	.402**	.335**	.389**	.300*	.132
	Sig. (2-tailed)	.001	.167	.000	.002		.002	.073	.168	.002	.010	.002	.022	.323
	N	59	56	58	59	59	58	59	59	59	59	59	58	58
TL6	CC	.249	.039	.414**	.430**	.391**	1.000	.454**	.253	.438**	.526**	.370**	.201	-.029
	Sig. (2-tailed)	.058	.774	.001	.001	.002		.000	.053	.001	.000	.004	.130	.831
	N	59	56	58	59	58	59	59	59	59	59	59	58	58
TL7	CC	.197	.217	.325*	.282*	.235	.454**	1.000	.186	.254	.203	.237	.388**	.314*
	Sig. (2-tailed)	.132	.104	.012	.029	.073	.000		.156	.051	.120	.068	.002	.015
	N	60	57	59	60	59	59	60	60	60	60	60	59	59
TL8	CC	.285*	.246	.413**	.407**	.182	.253	.186	1.000	.467**	.309*	.319*	.132	-.026
	Sig. (2-tailed)	.027	.066	.001	.001	.168	.053	.156		.000	.016	.013	.318	.846
	N	60	57	59	60	59	59	60	60	60	60	60	59	59
TL9	CC	.358**	.188	.517**	.385**	.402**	.438**	.254	.467**	1.000	.576**	.510**	.471**	.295*
	Sig. (2-tailed)	.005	.161	.000	.002	.002	.001	.051	.000		.000	.000	.000	.023
	N	60	57	59	60	59	59	60	60	60	60	60	59	59
TL10	CC	.242	.123	.352**	.344**	.335**	.526**	.203	.309*	.576**	1.000	.535**	.541**	.250
	Sig. (2-tailed)	.062	.362	.006	.007	.010	.000	.120	.016	.000		.000	.000	.056
	N	60	57	59	60	59	59	60	60	60	60	60	59	59
TL11	CC	.572**	.365**	.328*	.338**	.389**	.370**	.237	.319*	.510**	.535**	1.000	.496**	.214
	Sig. (2-tailed)	.000	.005	.011	.008	.002	.004	.068	.013	.000	.000		.000	.104
	N	60	57	59	60	59	59	60	60	60	60	60	59	59
TL12	CC	.254	.180	.394**	.319*	.300*	.201	.388**	.132	.471**	.541**	.496**	1.000	.612**
	Sig. (2-tailed)	.052	.185	.002	.014	.022	.130	.002	.318	.000	.000	.000		.000
	N	59	56	58	59	58	58	59	59	59	59	59	59	58
TL13	CC	.155	.195	.262*	.096	.132	-.029	.314*	-.026	.295*	.250	.214	.612**	1.000
	Sig. (2-tailed)	.240	.150	.047	.469	.323	.831	.015	.846	.023	.056	.104	.000	
	N	59	56	58	59	58	58	59	59	59	59	59	58	59

Correlation results for ALC factor on students' survey

			ALC1	ALC2	ALC3	ALC4	ALC5
Spearman's rho	ALC1	Correlation Coefficient	1.000	.261*	.064	.027	.165
		Sig. (2-tailed)		.046	.626	.836	.208
		N	60	59	60	60	60
	ALC2	Correlation Coefficient	.261*	1.000	.135	.136	.130
		Sig. (2-tailed)	.046		.306	.304	.326
		N	59	59	59	59	59
	ALC3	Correlation Coefficient	.064	.135	1.000	.622**	.751**
		Sig. (2-tailed)	.626	.306		.000	.000
		N	60	59	60	60	60
	ALC4	Correlation Coefficient	.027	.136	.622**	1.000	.745**
		Sig. (2-tailed)	.836	.304	.000		.000
		N	60	59	60	60	60
	ALC5	Correlation Coefficient	.165	.130	.751**	.745**	1.000
		Sig. (2-tailed)	.208	.326	.000	.000	
		N	60	59	60	60	60

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation results for LK factor on students' survey

			LK1	LK2	LK3	LK4	LK5
Spearman's rho	LK1	Correlation Coefficient	1.000	.302*	.337**	.487**	.307*
		Sig. (2-tailed)		.021	.009	.000	.018
		N	59	58	59	59	59
	LK2	Correlation Coefficient	.302*	1.000	.169	.250	.189
		Sig. (2-tailed)	.021		.199	.056	.151
		N	58	59	59	59	59
	LK3	Correlation Coefficient	.337**	.169	1.000	.484**	.306*
		Sig. (2-tailed)	.009	.199		.000	.018
		N	59	59	60	60	60
	LK4	Correlation Coefficient	.487**	.250	.484**	1.000	.493**
		Sig. (2-tailed)	.000	.056	.000		.000
		N	59	59	60	60	60
	LK5	Correlation Coefficient	.307*	.189	.306*	.493**	1.000
		Sig. (2-tailed)	.018	.151	.018	.000	
		N	59	59	60	60	60

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation results for TO factor on students' survey

			TO1	TO2	TO3
Spearman's rho	TO1	Correlation Coefficient	1.000	.446**	.414**
		Sig. (2-tailed)		.001	.001
		N	59	57	58
	TO2	Correlation Coefficient	.446**	1.000	.354**
		Sig. (2-tailed)	.001		.007
		N	57	58	57
	TO3	Correlation Coefficient	.414**	.354**	1.000
		Sig. (2-tailed)	.001	.007	
		N	58	57	59

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation results for COH factor on students' survey

		COH1	COH2	COH3	COH4	COH5	COH6	COH7	COH8
Spearman's rho	COH1 Correlation Coefficient	1.000	.423**	.633**	.375**	.372**	.239	.066	.294*
	Sig. (2-tailed)		.001	.000	.004	.004	.071	.626	.026
	N	58	58	58	58	58	58	57	57
	COH2 Correlation Coefficient	.423**	1.000	.540**	.441**	.342**	.341**	.141	.316*
	Sig. (2-tailed)	.001		.000	.000	.008	.008	.287	.015
	N	58	60	60	60	60	60	59	59
	COH3 Correlation Coefficient	.633**	.540**	1.000	.509**	.363**	.312*	.151	.238
	Sig. (2-tailed)	.000	.000		.000	.004	.015	.254	.070
	N	58	60	60	60	60	60	59	59
	COH4 Correlation Coefficient	.375**	.441**	.509**	1.000	.552**	.075	.020	.258*
	Sig. (2-tailed)	.004	.000	.000		.000	.572	.879	.049
	N	58	60	60	60	60	60	59	59
	COH5 Correlation Coefficient	.372**	.342**	.363**	.552**	1.000	.344**	.288*	.266*
	Sig. (2-tailed)	.004	.008	.004	.000		.007	.027	.042
	N	58	60	60	60	60	60	59	59
	COH6 Correlation Coefficient	.239	.341**	.312*	.075	.344**	1.000	.524**	.307*
	Sig. (2-tailed)	.071	.008	.015	.572	.007		.000	.018
	N	58	60	60	60	60	60	59	59
	COH7 Correlation Coefficient	.066	.141	.151	.020	.288*	.524**	1.000	.302*
	Sig. (2-tailed)	.626	.287	.254	.879	.027	.000		.021
	N	57	59	59	59	59	59	59	58
	COH8 Correlation Coefficient	.294*	.316*	.238	.258*	.266*	.307*	.302*	1.000
	Sig. (2-tailed)	.026	.015	.070	.049	.042	.018	.021	
	N	57	59	59	59	59	59	58	59

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Correlation results for RF factor on students' survey

Spearman's rho		RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	RF9	RF10	RF11	RF12	RF13	RF14	RF15	RF16
RF1	CC	1.000	.484**	.306*	.352**	.332*	.400**	.218	.019	.322*	.132	.274*	.116	.311*	.135	.294*	.393**
	Sig. (2-tailed)		.000	.018	.006	.011	.002	.094	.884	.012	.318	.034	.382	.015	.313	.025	.002
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60
RF2	CC	.484**	1.000	.493**	.556**	.406**	.407**	.322*	.123	.397**	.347**	.399**	.309*	.275*	.161	.421**	.283*
	Sig. (2-tailed)	.000		.000	.000	.002	.001	.012	.353	.002	.007	.002	.017	.033	.226	.001	.029
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60
RF3	CC	.306*	.493**	1.000	.556**	.470**	.570**	.484**	.277*	.362**	.325*	.331**	.350**	.348**	.136	.217	.078
	Sig. (2-tailed)	.018	.000		.000	.000	.000	.000	.033	.004	.012	.010	.007	.006	.308	.102	.556
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60
RF4	CC	.352**	.556**	.556**	1.000	.704**	.556**	.343**	.196	.429**	.362**	.343**	.368**	.474**	.277*	.477**	.215
	Sig. (2-tailed)	.006	.000	.000		.000	.000	.007	.136	.001	.005	.007	.004	.000	.035	.000	.099
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60
RF5	CC	.332*	.406**	.470**	.704**	1.000	.578**	.395**	.184	.499**	.356**	.443**	.446**	.381**	.258	.463**	.237
	Sig. (2-tailed)	.011	.002	.000	.000		.000	.002	.171	.000	.007	.001	.000	.003	.053	.000	.073
	N	58	58	58	58	58	57	58	57	58	57	58	57	58	57	56	58
RF6	CC	.400**	.407**	.570**	.556**	.578**	1.000	.400**	.302*	.393**	.350**	.331*	.253	.448**	.204	.388**	.154
	Sig. (2-tailed)	.002	.001	.000	.000	.000		.002	.021	.002	.007	.010	.055	.000	.128	.003	.245
	N	59	59	59	59	57	59	59	58	59	58	59	58	59	57	57	59
RF7	CC	.218	.322*	.484**	.343**	.395**	.400**	1.000	.569**	.559**	.364**	.501**	.466**	.540**	.317*	.403**	.483**
	Sig. (2-tailed)	.094	.012	.000	.007	.002	.002		.000	.000	.005	.000	.000	.000	.015	.002	.000
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60
RF8	CC	.019	.123	.277*	.196	.184	.302*	.569**	1.000	.511**	.321*	.416**	.415**	.483**	.301*	.293*	.396**
	Sig. (2-tailed)	.884	.353	.033	.136	.171	.021	.000		.000	.013	.001	.001	.000	.023	.027	.002
	N	59	59	59	59	57	58	59	59	59	59	59	58	59	57	57	59
RF9	CC	.322*	.397**	.362**	.429**	.499**	.393**	.559**	.511**	1.000	.496**	.511**	.485**	.411**	.475**	.507**	.296*
	Sig. (2-tailed)	.012	.002	.004	.001	.000	.002	.000	.000		.000	.000	.000	.001	.000	.000	.022
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60
RF10	CC	.132	.347**	.325*	.362**	.356**	.350**	.364**	.321*	.496**	1.000	.526**	.456**	.214	.220	.225	.240
	Sig. (2-tailed)	.318	.007	.012	.005	.007	.007	.005	.013	.000		.000	.000	.104	.100	.093	.067

	N	59	59	59	59	57	58	59	59	59	59	59	58	59	57	57	59
RF11	CC	.274*	.399**	.331**	.343**	.443**	.331*	.501**	.416**	.511**	.526**	1.000	.755**	.527**	.480**	.480**	.460**
	Sig. (2-tailed)	.034	.002	.010	.007	.001	.010	.000	.001	.000	.000		.000	.000	.000	.000	.000
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60
RF12	CC	.116	.309*	.350**	.368**	.446**	.253	.466**	.415**	.485**	.456**	.755**	1.000	.573**	.521**	.398**	.462**
	Sig. (2-tailed)	.382	.017	.007	.004	.000	.055	.000	.001	.000	.000	.000		.000	.000	.002	.000
	N	59	59	59	59	57	58	59	58	59	58	59	59	59	57	57	59
RF13	CC	.311*	.275*	.348**	.474**	.381**	.448**	.540**	.483**	.411**	.214	.527**	.573**	1.000	.637**	.506**	.504**
	Sig. (2-tailed)	.015	.033	.006	.000	.003	.000	.000	.000	.001	.104	.000	.000		.000	.000	.000
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60
RF14	CC	.135	.161	.136	.277*	.258	.204	.317*	.301*	.475**	.220	.480**	.521**	.637**	1.000	.577**	.407**
	Sig. (2-tailed)	.313	.226	.308	.035	.053	.128	.015	.023	.000	.100	.000	.000	.000		.000	.002
	N	58	58	58	58	57	57	58	57	58	57	58	57	58	58	56	58
RF15	CC	.294*	.421**	.217	.477**	.463**	.388**	.403**	.293*	.507**	.225	.480**	.398**	.506**	.577**	1.000	.424**
	Sig. (2-tailed)	.025	.001	.102	.000	.000	.003	.002	.027	.000	.093	.000	.002	.000	.000		.001
	N	58	58	58	58	56	57	58	57	58	57	58	57	58	56	58	58
RF16	CC	.393**	.283*	.078	.215	.237	.154	.483**	.396**	.296*	.240	.460**	.462**	.504**	.407**	.424**	1.000
	Sig. (2-tailed)	.002	.029	.556	.099	.073	.245	.000	.002	.022	.067	.000	.000	.000	.002	.001	
	N	60	60	60	60	58	59	60	59	60	59	60	59	60	58	58	60

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Appendix 18: Mann Whitney U results for teachers' & students' surveys

Mann Whitney U results for differences in mean scores of both the questionnaires

	TL	ALC	LK	TO	COH	RF
Mean	2.53	2.90	2.92	3.11	3.04	2.93
SD	.519	.620	.697	.86	.639	.706
Median	2.53	2.80	2.90	3.00	3.12	2.90
IQR	.62	.60	1.00	1.67	.88	1.11
Mann Whitney U	2319.500	4391.000	3107.000	2950.000	2709.500	2990.500
Z	-3.347	-2.585	-6.720	-7.265	-7.984	-7.069
P	.001	.010	.000	.000	.000	.000
R	-0.25	-0.19	-0.51	-0.55	-0.60	-0.53

Mann Whitney U results for differences in the TL factor

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	r
TL1	Teacher Perceptions	112	99.54	11149.00					
	Student Perceptions	60	62.15	3729.00	1899.000	3729.000	-4.959	.000	-0.37
	Total	172							
TL2	Teacher Perceptions	110	94.36	10379.50					
	Student Perceptions	57	64.01	3648.50	1995.500	3648.500	-4.114	.000	-0.31
	Total	167							
TL3	Teacher Perceptions	112	74.24	8314.50					
	Student Perceptions	59	108.33	6391.50	1986.500	8314.500	-4.684	.000	-0.35
	Total	171							
TL4	Teacher Perceptions	110	83.72	9209.00					
	Student Perceptions	60	88.77	5326.00	3104.000	9209.000	-.701	.483	-0.05
	Total	170							
TL5	Teacher Perceptions	111	99.32	11024.00					
	Student Perceptions	59	59.51	3511.00	1741.000	3511.000	-5.268	.000	-0.40
	Total	170							
TL6	Teacher Perceptions	111	82.53	9161.00					
	Student Perceptions	59	91.08	5374.00	2945.000	9161.000	-1.208	.227	-0.09
	Total	170							
TL7	Teacher Perceptions	112	99.12	11101.50					
	Student Perceptions	60	62.94	3776.50	1946.500	3776.500	-4.816	.000	-0.36
	Total	172							
TL8	Teacher Perceptions	109	86.81	9462.50					
	Student Perceptions	60	81.71	4902.50	3072.500	4902.500	-.698	.485	-0.05
	Total	169							
TL9	Teacher Perceptions	111	97.21	10790.00					
	Student Perceptions	60	65.27	3916.00	2086.000	3916.000	-4.191	.000	-0.31
	Total	171							

TL1 Teacher Perceptions	112	75.29	8433.00					
0 Student Perceptions	60	107.42	6445.00	2105.000	8433.000	-4.334	.000	-0.33
Total	172							
TL1 Teacher Perceptions	111	92.95	10317.50					
1 Student Perceptions	60	73.14	4388.50	2558.500	4388.500	-2.649	.008	-0.20
Total	171							
TL1 Teacher Perceptions	111	89.02	9881.00					
2 Student Perceptions	59	78.88	4654.00	2884.000	4654.000	-1.389	.165	-0.10
Total	170							
TL1 Teacher Perceptions	110	92.10	10131.00					
3 Student Perceptions	59	71.76	4234.00	2464.000	4234.000	-2.750	.006	-0.20
Total	169							

Mann Whitney U results for differences in the ALC factor

Factor					Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	r
	Group	N	Mean Rank	Sum of Ranks					
ALC1	Teacher Perceptions	112	98.06	10982.50					
	Student Perceptions	60	64.93	3895.50	2065.500	3895.500	-4.563	.000	-0.34
	Total	172							
ALC2	Teacher Perceptions	112	76.39	8556.00					
	Student Perceptions	59	104.24	6150.00	2228.000	8556.000	-3.846	.000	-0.29
	Total	171							
ALC3	Teacher Perceptions	112	87.71	9824.00					
	Student Perceptions	60	84.23	5054.00	3224.000	5054.000	-.465	.642	-0.03
	Total	172							
ALC4	Teacher Perceptions	111	94.43	10482.00					
	Student Perceptions	60	70.40	4224.00	2394.000	4224.000	-3.178	.001	-0.24
	Total	171							
ALC5	Teacher Perceptions	112	94.71	10607.50					
	Student Perceptions	60	71.18	4270.50	2440.500	4270.500	-3.062	.002	-0.23
	Total	172							

Mann Whitney U results for differences in the LK factor

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	r
LK1	Teacher Perceptions	111	105.20	11677.50					
	Student Perceptions	59	48.43	2857.50	1087.500	2857.500	-7.597	.000	-0.57
	Total	170							
LK2	Teacher Perceptions	111	85.55	9496.50					
	Student Perceptions	59	85.40	5038.50	3268.500	5038.500	-.021	.983	-0.07
	Total	170							
LK3	Teacher Perceptions	112	98.87	11073.50					
	Student Perceptions	60	63.41	3804.50	1974.500	3804.500	-4.672	.000	-0.35
	Total	172							
LK4	Teacher Perceptions	111	100.21	11123.50					
	Student Perceptions	60	59.71	3582.50	1752.500	3582.500	-5.335	.000	-0.40
	Total	171							
LK5	Teacher Perceptions	111	97.77	10853.00					
	Student Perceptions	60	64.22	3853.00	2023.000	3853.000	-4.466	.000	-0.34
	Total	171							

Mann Whitney U results for differences in the TO factor

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	r
TO1	Teacher Perceptions	112	100.89	11299.50					
	Student Perceptions	59	57.74	3406.50	1636.500	3406.500	-5.688	.000	-0.43
	Total	171							
TO2	Teacher Perceptions	111	104.36	11584.00					
	Student Perceptions	58	47.95	2781.00	1070.000	2781.000	-7.516	.000	-0.57
	Total	169							
TO3	Teacher Perceptions	112	102.20	11446.50					
	Student Perceptions	59	55.25	3259.50	1489.500	3259.500	-6.196	.000	-0.47
	Total	171							

Mann Whitney U results for differences in the COH factor

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	r
COH1	Teacher Perceptions	111	89.72	9959.00					
	Student Perceptions	58	75.97	4406.00	2695.000	4406.000	-1.866	.062	-0.14
	Total	169							
COH2	Teacher Perceptions	112	103.27	11566.50					
	Student Perceptions	60	55.19	3311.50	1481.500	3311.500	-6.344	.000	-0.48
	Total	172							
COH3	Teacher Perceptions	110	103.86	11425.00					
	Student Perceptions	60	51.83	3110.00	1280.000	3110.000	-6.919	.000	-0.53
	Total	170							
COH4	Teacher Perceptions	111	94.41	10479.50					
	Student Perceptions	60	70.44	4226.50	2396.500	4226.500	-3.181	.001	-0.24
	Total	171							
COH5	Teacher Perceptions	112	102.96	11531.50					
	Student Perceptions	60	55.78	3346.50	1516.500	3346.500	-6.343	.000	-0.48
	Total	172							
COH6	Teacher Perceptions	111	100.90	11200.00					
	Student Perceptions	60	58.43	3506.00	1676.000	3506.000	-5.611	.000	-0.42
	Total	171							
COH7	Teacher Perceptions	110	102.56	11282.00					
	Student Perceptions	59	52.25	3083.00	1313.000	3083.000	-6.736	.000	-0.51
	Total	169							
COH8	Teacher Perceptions	111	100.36	11139.50					
	Student Perceptions	59	57.55	3395.50	1625.500	3395.500	-5.667	.000	-0.43
	Total	170							

Mann Whitney U results for differences in the RF factor

	Group	N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	r
RF1	Teacher Perceptions	110	102.24	11246.00					
	Student Perceptions	60	54.82	3289.00	1459.000	3289.000	-6.294	.000	-0.48
	Total	170							
RF2	Teacher Perceptions	110	93.12	10243.50					
	Student Perceptions	60	71.53	4291.50	2461.500	4291.500	-2.927	.003	-0.22
	Total	170							
RF3	Teacher Perceptions	112	98.80	11065.50					
	Student Perceptions	60	63.54	3812.50	1982.500	3812.500	-4.644	.000	-0.35
	Total	172							
RF4	Teacher Perceptions	111	104.00	11544.00					
	Student Perceptions	60	52.70	3162.00	1332.000	3162.000	-6.778	.000	-0.51
	Total	171							
RF5	Teacher Perceptions	111	97.06	10774.00					
	Student Perceptions	58	61.91	3591.00	1880.000	3591.000	-4.649	.000	-0.35
	Total	169							
RF6	Teacher Perceptions	111	101.17	11230.00					
	Student Perceptions	59	56.02	3305.00	1535.000	3305.000	-5.973	.000	-0.45
	Total	170							
RF7	Teacher Perceptions	111	99.13	11003.50					
	Student Perceptions	60	61.71	3702.50	1872.500	3702.500	-4.964	.000	-0.37
	Total	171							
RF8	Teacher Perceptions	111	99.86	11084.50					
	Student Perceptions	59	58.48	3450.50	1680.500	3450.500	-5.468	.000	-0.41
	Total	170							
RF9	Teacher Perceptions	111	98.73	10958.50					
	Student Perceptions	60	62.46	3747.50	1917.500	3747.500	-4.848	.000	-0.37
	Total	171							
RF10	Teacher Perceptions	111	97.99	10876.50					
	Student Perceptions	59	62.01	3658.50	1888.500	3658.500	-4.836	.000	-0.37
	Total	170							
RF11	Teacher Perceptions	112	99.71	11167.50					
	Student Perceptions	60	61.84	3710.50	1880.500	3710.500	-5.000	.000	-0.38
	Total	172							
RF12	Teacher Perceptions	112	96.30	10785.50					
	Student Perceptions	59	66.45	3920.50	2150.500	3920.500	-3.930	.000	-0.30
	Total	171							
RF13	Teacher Perceptions	111	98.36	10917.50					
	Student Perceptions	60	63.14	3788.50	1958.500	3788.500	-4.676	.000	-0.35
	Total	171							
RF14	Teacher Perceptions	110	98.15	10797.00					
	Student Perceptions	58	58.60	3399.00	1688.000	3399.000	-5.302	.000	-0.40

Total	168							
RF15 Teacher Perceptions	112	100.34	11238.50					
Student Perceptions	58	56.84	3296.50	1585.500	3296.500	-5.759	.000	-0.44
Total	170							
RF16 Teacher Perceptions	111	96.85	10750.50					
Student Perceptions	60	65.93	3955.50	2125.500	3955.500	-4.108	.000	-0.31
Total	171							

Appendix 19: Colour-coding & sample analysis for RQ-3

Interview questions for teachers

1. Do you think Arab EFL students use cohesive devices effectively to create appropriate academic texts such as the argumentative essays? If yes, what strengths and weaknesses have you found in students' use of cohesive devices?
2. Do you think Arab EFL students are familiar with the rhetorical structure of the argumentative essays? How effectively, in your opinion, do they use cohesive devices in the rhetorical structure to achieve different argumentative functions?
3. What would you suggest to help students make effective use of the cohesive devices in academic writing?

INT-Q-1

Colour-coding for themes

	Use of CDs (U) Deficient (U1) Conditional (U2)	Strengths (S) Grammatical accuracy (S1) Lexical range (S2) Paragraph organization (S3) Cohesive devices (S4) Curriculum matters (S5) Functional use (S6) Arabic Culture (S7) Cognition (S8) Language proficiency (S9)	Weaknesses (W) Grammatical accuracy (W1) Lexical range (W2) Paragraph organization (W3) Cohesive devices (W4) Curriculum matters (W5) Functional use (W6) Arabic Culture (W7) Cognition (W8) Language proficiency (W9)
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Results for interview question 1

U			S			W		
		%			%			%
U1	13	43.33	S1	0		W1	8	11.11
U2	17	56.66	S2	1	7.69	W2	5	6.94
Total	30		S3			W3	6	8.33
			S4	7	53.84	W4	18	25
			S5			W5	5	6.94
			S6			W6	9	12.5
			S7	2	15.38	W7	5	6.94
			S8	3	23.07	W8	4	5.55
			S9			W9	13	18.05
			Total responses	13		Total responses	72	

INT-Q-2

Colour-coding for themes

	Familiarity with RS (F)	Use of CDs in RS (URS)	Academic Functions (AF)
	Familiar (F1) Not familiar (F2)	Grammatical cohesion (URS 1) Lexical cohesion (URS 2) Over/underuse (URS 3) Contextual factors (URS 4)	Oracy (AF 1) Introduction (AF 2) Thesis/topic statement (AF 3) Supporting detail (AF 4) Conclusion (AF 5) Students inability (AF 6) Unsure (AF 7)

Results for interview question 2

F			URS			AF		
		%			%			%
F 1	10	33.33	URS 1	7	18.42	AF 1	1	2.63
F 2	20	66.66	URS 2	3	7.89	AF 2	1	2.63
Total responses	30		URS 3	14	36.84	AF 3	2	5.26
			URS 4	14	36.84	AF 4	7	18.42
			Total responses	38		AF 5	1	2.63
						AF 6	18	47.36
						AF 7	8	21.05
						Total responses	38	

INT-Q-3

Colour-coding for themes

	Pedagogy (PDG)
	Reading (PDG 1) Practice (PDG 2) Pedagogy (PDG 3) Lexical base (PDG 4) Syllabus design (PDG 5) Contextual factors (PDG 6)

Results for interview question 3

PDG		
PDG 1	16	21.33%
PDG 2	14	19.44%
PDG 3	15	20.83%
PDG 4	3	4.16%
PDG 5	16	21.33%
PDG 6	11	15.27%
Total Responses	75	

Sample analysis 1 for interview questions

Participant 17

IQ-1

They do use cohesive devices to compose their essays both in the controlled and free writing. As L2 learners they are familiar with CDs. They feel challenged for expressing themselves in writing. Sometimes they use cds as teachers do for example, they make use of the temporal conjunctive like "first, secondly", they will write three ideas. But they use them wrongly i.e. they use adjectives in place of adverbs. This refers to teachers' incompetence. At advanced level, they are better at using cds because of the exposure. Another strength seems to be the L1 background which they may use while writing in English.

IQ-2

Use of rhetorical structure is an observable phenomenon. but students have a rudimentary level of English. Those students who have traveled abroad or come from an educational background, they are well versed in using rhetorical structure and devices. they hold an opinion and argue very effectively. they can build the structure of an argument with the help of cohesive devices. they have been trained like that. I believe that if the students are extrinsically motivated and exposed to English language they can build an

argument. e.g. fail to produce argument when asked to write on topics which are alien to their culture. In fact, they need some input in the form of reading to generate ideas and develop rhetorical structure.

IQ-3

By giving them cds and ideas to use; cloze tests etc. Teacher should only mentor. There is need of more and more exposure to the domain of thought and idea. Culture of reading and writing needs to be promoted on campus. need of creating writing centers to provide support. need to engage the learner in the writing process. teacher training for teaching writing skill.

Sample analysis 2 for interview questions

Participant 21

IQ-1

Yes, students use CDs but not effectively. They are undersuers or overusers of CDs. When they use conjunctives they use it wrongly. They look some gap filling items with no semantic meaning.

IQ-2

They might be ok with reference, but when it comes to conjunctives they misuse. They have problems with thesis statement; evidence and support. They can't properly substantiate. I mean, don't know how to argue for a claim. You know understanding of rhetorical functions in a genre comes first. We need to take a stance and voice it in a very effective way. CDs facilitate their argument or make it explicit. Students don't create semantic relations at the intersentential level. There is lack of mastery of functions.

IQ-3

First, need to train students how to write a cohesive paragraph. Students need to understand the cohesion is semantic not structural. Teaching of rhetorical structure. I say that repetition in Arabic is functional; it has a role. We need to focus on language universals. Cohesion should be taught in relation to domain, i.e humanities vs scientific texts (register & genre).